

Lichfield District Council

Public Realm Strategy

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Conduit Street looking north to the Cathedral

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* Additional Appendices

A Consultation Results -
Survey Responses

- Action Plan, provided by Gleeds

*Please refer to additional appendices as separate document
from this report.

Introduction

“Places affect us all – they are where we live, work and spend our leisure time. Well-designed places influence the quality of our experience as we spend time in them and move around them. We enjoy them, as occupants or users but also as passers-by and visitors. They can lift our spirits by making us feel at home, giving us a buzz of excitement or creating a sense of delight. They have been shown to affect our health and well-being, our feelings of safety, security, inclusion and belonging, and our sense of community cohesion.” - National Design Guide, Planning practice guidance for beautiful, enduring and successful places. Ministry of Housing, Communities & Local Government, 2021

“Have nothing in your streets and urban spaces which you do not know to be useful or believe to be beautiful” - William Morris

Although William Morris was originally referring to the ‘house’ and not our public spaces, between the two quotations above is encapsulated all we are trying to achieve within this Public Realm Strategy for Lichfield City Centre.

The Public Realm Strategy springs from the Lichfield City Centre Masterplan, which was developed by David Lock Associates in 2020 and provides a blueprint for the development of the city over the next 20 years. The Masterplan identifies a number of projects and proposals including new developments and public realm improvements, which are designed to complement and connect one with another.

These proposals have been developed from six identified Masterplan objectives; which are:

- A Strong Historic Core
- Complementary & Supporting Uses
- Welcoming Gateways
- Vibrant Streets & Spaces
- Quality Accessible Environment
- The “Green” & Sustainable City

Of particular relevance to this study, the Masterplan identifies the need for an “attractive and usable public realm”, as one of four design principles aimed at ensuring design quality across all the objectives; this principle is the glue to bind the various strands of the Masterplan together. From this underpinning principle can be derived five further objectives that help set the template for this study.

These are:

- Removal of street clutter and promotion of design simplicity using a coordinated approach to signage and wayfinding across the city centre. A key component of this is that any public realm works must be robust, low maintenance and of a design suitable to a historic city centre.
- Allow for pedestrian desire lines in the design and layout of development. This is especially important for pedestrian cross routes around the city centre linking together key parts of the city, giving consideration of Staffordshire County Council’s Local Cycling and Walking Infrastructure Plan (LCWIP)
- Consideration of landscaping opportunities that positively impact upon biodiversity within the city centre, paying particular attention to the Council’s Local Plan 2015 evidence base (Nature Recovery Network) which discusses the habitat creation opportunities within urban cores.
- A coordinated but limited palette of surface materials
- Coordinated specification of street furniture components.

The purpose of the Public Realm Strategy is to set out a basis for achieving these objectives in the public realm. It does so by providing a cohesive approach to the unifying elements of urban design such as street design, signage, lighting, public art, green infrastructure and materials.

Also of importance is the Council’s Local Plan Allocations (2019), from which a series of policies covering planning, design, transportation, accessibility, biodiversity and other issues have now been adopted for development management purposes. Until the adoption of Local Development Framework Documents, which will supersede these policies, they provide the context along with the SPD’s within which development proposals within the city must be progressed.

The Lichfield District Local Plan Strategy 2015 identifies the priorities and objectives for Lichfield, which are set within a broader vision that by 2029, *“... residents of the District will continue to be proud of their community, experiencing a strong sense of local identity, of safety and of belonging. Everyone will take pride in the District’s history, its culture, its well cared for built and natural environment, its commitment to addressing issues of climate change, and the range of facilities that it offers. Our residents will have opportunities to keep fit and healthy, and will not be socially isolated.”*

So, with a keen eye on the broader vision within the Local Plan, this study is a key device to move the approved City Centre Masterplan forward and help guide the public realm aspects of development over the next 20 year period.

Background

“A good city is like a good party – people stay longer than really necessary because they are enjoying themselves.” - Jan Gehl, urbanist

Lichfield is an historic cathedral city with a significant number of heritage assets (including several Grade I Listed Buildings) located within the Lichfield city centre Conservation Area. The historic character of the city centre is a key attraction to visitors and residents alike, and Lichfield is well-placed for the new trend of its experience-led offer to attract visitors to the city. The city has a number of leisure and cultural venues and an extensive festival, concerts and events programme to cater for its tourism economy.

With the rapid shift in consumer demand, the success of city centres is no longer measured simply by the quantum of retail footage alone. How the city centre is used and understanding what are the attractors are, is a far more informative and relevant method of analysis. So following this new thinking, a study of the pattern of usage within Lichfield, in terms of pedestrian footfall, was recently undertaken by Springboard and concluded that Lichfield has a Speciality signature.

What this means is that the pattern of footfall is a consequence of the key characteristics of speciality towns and cities which comprise:

- An anchor which is not retail, in Lichfield’s case - Heritage
- Attracting visitors but serving the local population
- Having longer dwell time
- Focus is on protecting identity and positioning
- Offering something unique and special

These characteristics are immensely valuable, and Lichfield is the only city in its sub-region that is defined as a Speciality town/city. These attributes and characteristics must, therefore, be protected and the potential monopolised. Interestingly, one of the key characteristics of Speciality towns and cities is that footfall is as high or higher in the peak summer months than in December.

This affords Lichfield an opportunity to differentiate itself from other towns and cities, and to deliver a unique offer that capitalises on its Speciality signature type.

However, despite its compact nature, parts of the city centre can feel disjointed due to poor legibility and signage. The city centre has a variety of public spaces that have recently benefited from investment, including Beacon Park and Minster Pool. However the development of the public realm across the city has occurred piecemeal,

without a holistic vision and approach, or the guidance of a consistent set of design principles. As a result, the streets and links between these areas are often confused and poorly signposted, sometimes unattractive and hinder an ease of intuitive navigation around the city centre.

Analysis of the Existing Public Realm

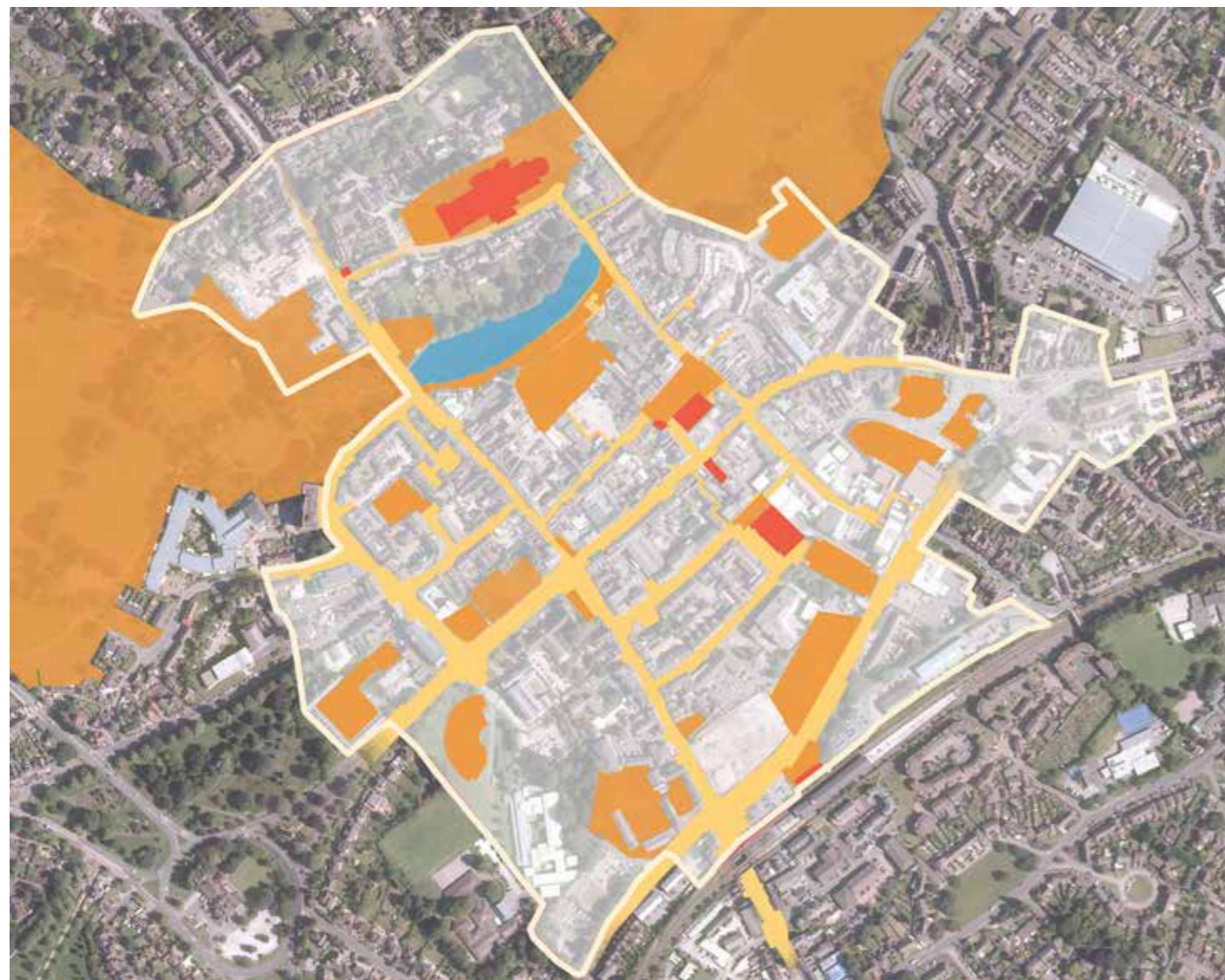
Lichfield's Public Realm

Lichfield is blessed with a rich legacy of heritage buildings set within a compact, structured, attractively scaled network of historic streets and spaces. As such, this is not placemaking, but a placemarking exercise, the true purpose of which is to enable the buildings and spaces to shine and provide a stage for the public use, enjoyment and appreciation of their city. When the structure and built elements of the city are performing well, the public realm does not need to shout and can play an elegant supporting role.

The sequence of urban spaces and the streets and alleys that connect them and form the public realm network is shown on the diagram below. What is noticeable is the relatively sparsity of public place within the historic core. The majority of the places indicated are the parks and open spaces of Beacon Park and Stowe Pool to the west and east and the car parks and transport hubs to the south.

Lichfield's Public Realm Key

- Landmark** Buildings
- Places** and spaces across the city centre
- Network** of streets and alleys that connect them



6 Lichfield's Public Realm (above)

Placemarking Elements

The quality, consistency and condition of street surfaces, signs, bollards, cycle racks, bins and seating have a significant influence on the perceived quality of the public realm. It has a key role in unifying streets and spaces and bringing identity to the city centre.

There follows an overview of the components of the existing public realm, with a more detailed analysis of the various materials, elements and components, their condition and location, included in the Appendix at the back of this report- please refer to Summary tables.

Streets and Alleys

Street Materials

The strong character and structure inherent in Lichfield's historic street pattern is often undermined by inappropriate, inconsistent and badly maintained materials. A number of surface treatments are present in Lichfield's city centre area, including concrete block paving, concrete slabs, brick paviors, stone paving and coloured tarmac. The apparently piecemeal application of surface materials has happened over a period of time and complicates the streetscape, doing little to complement the setting of historic buildings and aid the orientation of pedestrians.

The streets and spaces around St Mary's Church and along Tamworth Street and Bore Street have been recently renewed with quality, predominantly natural surface materials and present a palette of finishes that complements the various building forms, colours and textures - stone, brick and render.

Street Furniture

Many streets and spaces in Lichfield present a clutter of uncoordinated street furniture and signage that often obstructs pedestrian movement and hides much of the town's character. This is unfortunate and unnecessary, as ironically, much of the historic street furniture adds to the distinctiveness of place and visual interest within the public realm.

As with surface materials, the furniture in Lichfield is very inconsistent. There is a significant variation in colour, shading, size and form. This is apparent with the various types and styles of bollards, which are heavily used in Lichfield to delineate streets and spaces and protect pavement areas.

Fingerposts, bollards and other items such as cycle racks, and benches are also often poorly sited and in a poor state of repair, further undermining the streetscape and the quality of pedestrian experience. Through their location, signposts frequently impede, as opposed to facilitate, pedestrian movement.

The plethora of signage, with different styles of sign often fulfilling the same function, is also confusing and should be brought together in a coordinated manner.



Some elements of signage provide an attractive and interesting addition to the street scene, for example, the Heart of England Way pavement markers.

Similarly, certain elements of street furniture are carefully crafted with a combination of complementary materials that complement the architecture and scale of the street. These, perhaps, point the way forward.



Railing detail: Cathedral Close (above)

Spaces and Places

City places are critical to the urban life of the city; it is here that the visitor and resident gather, meet and basically participate in civic activity. The squares, promenades, parks and gardens are breaks in the network of streets where the space is available to slow the pace and step aside from the urban flow.

Their design and layout is frequently determined by the intended use and the character and response to the space can then be categorised according to this role:

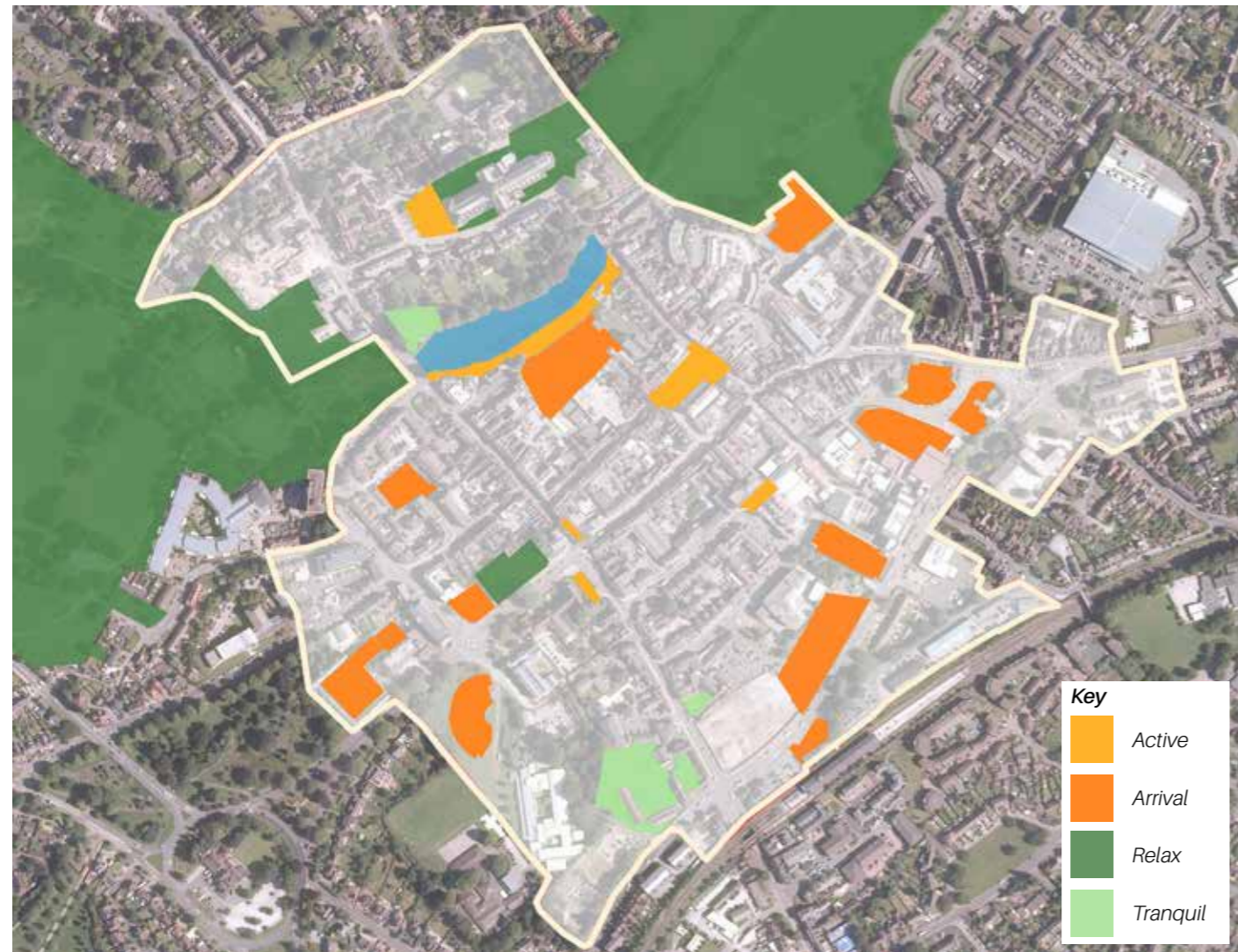
Arrival spaces - points of arrival for the visitor to the city - the rail station, bus station and car parks. Often busy points of interchange or connection where people meet or orientate themselves before setting out on their trip. As a first impression, these are important urban spaces for the city, that frequently set the tone for the visit. Clear, unambiguous information is essential. Currently these are the least successful of the city spaces, where vehicular utility over-rides the human and pedestrian experience.

With the exception of the Bird Street Car Park these spaces are peripheral to the core city centre, where they are best placed to pick up the visitor and enable modal change.

Active Spaces - closely connected to the primary pedestrian movement network, these places are lively and animated by activity; a stage for public life - eating, drinking, markets, people-watching, meeting, festivals and events. Market Square would be such a space. Given the variety of uses that might occur, flexibility and adaptability is important.

Relaxed Spaces - frequently the parks and gardens, but with gentler through movement of cyclist and pedestrians. Interaction is still sought and invited, but also the ability to draw away into quieter, more sheltered areas.

Tranquil Spaces - Often away or concealed from the primary movement routes, areas for quieter reflection and conversation. Remembrance Gardens would be a good example.



8 Lichfield 's Spaces (above)



Lighting

The lighting of the core city centre area is from building mounted fittings, which removes the clutter and obstruction of light columns within the public realm and the detrimental effect that highways lighting can have on the scale of historic streets. The lighting levels are generally low intensity and muted, with the wall mounted fittings washing light onto the façades of the buildings and creating a pleasing effect of silhouetting activity within the street.

The light fittings themselves are generally low pressure sodium, which although giving a warm light, has poor colour rendition, that loses the various colours on the façades and paints them all with an orange light. There is also a perception of insecurity after dark associated with these fittings as facial recognition is made more difficult.

A number of commercial properties have adopted their own lighting schemes for their premises, often using brighter and/or coloured lighting effects. Whilst this can bring animation to the street façade, if uncoordinated can detract from the holistic qualities and character of the streets and spaces, and place an unwarranted emphasis on particular buildings to the detriment of the composition and true hierarchy of civic buildings.

A balance also needs to be achieved with shop lighting, where certain overly bright shop windows can again disturb the balance within the street, dazzling the onlooker and spilling light onto the pavement.

Beyond the historic core, street lighting is generally to highways standard, yet there is space and scale within the road corridor to accommodate such light fixtures and fittings. However, the contrast from the more muted, wall-mounted fittings and highway lighting is marked, and an intermediate form and standard of lighting would be appropriate to bring the scale down to that of the pedestrian.

Maintenance and Management

A problem with using a broad palette of paving materials and styles of street furniture is the logistics of maintenance. Where works to the paving is required, multiple types of materials need to be kept in stock or arrangements put in place with numerous suppliers. This often results in surfaces being patched with concrete or tarmacadam, regardless of the original design material. This applies equally to street furniture, which often goes unrepaired or maintained, lending an air of neglect to the street and fostering further abuse or damage.



Highways & Traffic

Detrimental to the current city public realm and a challenge of the ambitions of the masterplan, is the increasing volume and speed of vehicular traffic, generating barriers to active travel movements, reinforcing separation between areas and undermining the qualities and scale of the historic city. This is particularly marked to the Birmingham Road Corridor, separating the rail station from the city, St John's Street leading into the Friary, and Swan Road leading northward into Bird Street. It is hoped and planned that the completion of the Southern Bypass will remove traffic, particularly HGVs, from Birmingham Road, further opening up opportunities for an enhanced urban environment, reinforced through legislative restrictions of traffic on the road.

Within the city centre core, restrictions are already in place to reduce traffic volumes and types of user to certain times of the day and days of the week. These restricted areas are shown on Figure 5 in the Appendix. The restrictions are confusing with both pedestrians and drivers unsure of where and when certain vehicles can enter these key central areas. A separate study is underway on Pedestrianised Streets and sets out to clarify this situation. The assumption for this study is that restrictions will be more stringent, extensive and enforced across the core city centre area.

Development Sites

Two key development sites were identified within the Masterplan, Birmingham Road at the heart of the Southern Gateway Quarter and Bird Street Car Park. These two sites will be brought forward in the short to medium term and their development provides not only additional facilities and amenities, but presents real opportunity to address current placemaking issues, create new public spaces and repair the fabric of the city centre public realm. This strategy, therefore, provides specific guidance on the incorporation of public realm within these two developments.

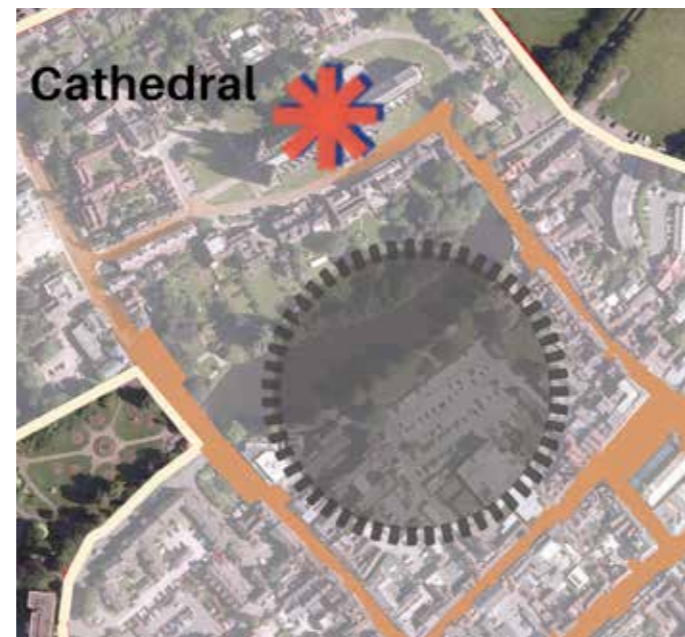
A further two development sites at University West Car Park and District Council House, will conform to the guidance as applicable to the quarter, but are not specifically referenced within this report.

Birmingham road Development Site

The current hoarded site presents an unattractive frontage at a primary gateway to the city centre with other associated areas of development currently maintained in a 'meanwhile' state.

Bird Street Car Park

The development of the Bird Street Car Park would address a significant structural and placemaking issue of the hole this area creates in the public realm of the city centre.



Bird Street Car Park - the hole in the public realm (above)

The prospect from this space is off the backs and yards of retail properties and a high brick wall to the north. Pedestrian and cyclist access from the west is via the busy car park access and from Market Street to the south,

via the narrow and uninviting Bird Street Walk. The car park itself is a busy and extensive expanse of cars and traffic that discourages any pedestrian movement across the space and is completely at odds with the qualities of public spaces within the rest of the city centre.

A further repercussion of this void in the public realm, is the perceived separation of the cathedral from the city core and the fact that the visitor is steered toward the rear of the cathedral from St Mary's Church along Dam Street.



Cathedral to town, a sense of disconnection (above)

Gateways and Entrances

A51/St Johns Street

The A51 approaching from the south and the M6 Toll is historic entry point of the London Road. Today, the gateway into the city is marked by the railway overbridge and the junction with the equally busy Birmingham Road.

Crossing the Birmingham Road junction, St John Street to the Friary is a busy, noisy, traffic dominated corridor with narrow pavements, but contains some elegant and important listed buildings including the Grade I listed Hospital of St John Baptist without the Barrs and its adjacent chapel, which sits to the west of the Birmingham Road Junction with St Johns Street and has marked the gateway to the city since the early 12th century. The Grade II listed buildings and attractive gardens that are part of the Lichfield District Council Offices are located to the east of the street, with a route through from St Johns Street to the car park to the rear of the offices.

The Friary

The Friary is the main vehicular route in the city centre from the west and The Friary Car Park is well located directly off The Friary to accommodate the visitor to the city centre. However, whilst the car park is only 240 metres from the junction of Bore Street and St John's Street, approximately a three minute walk, it is perceived as being distant from the city centre and is underused. There is a need to improve the connectivity between car park and the city centre, through improvements to the pedestrian connections along The Friary and via Sandford Street.

Lloyd's Walk

The area of Lombard Car Park borders the major open space of Stowe Pool, and the car park also provides parking for the cathedral, with access along Cross Keys and Reeve Lane. However, the most direct connection to the city centre from the car park is through the somewhat fractured urban structure around Cross Keys and then the tight and (particularly after dark) claustrophobic alley of Lloyd's Walk.

Questions on perceptions of personal safety within the public consultation exercise reinforced the impression of issues around Lloyd's Walk as a means of access and gateway to the city centre with many people expressing concern particularly after dark and on winter's evenings.

Beacon Street/Bird Street

The gateway into the city centre from the north-west, falls downhill past the former Angel Croft hotel site to the west and the Close, the point of entry to the Cathedral Quarter, to the east. In crossing the listed Bird Street Bridge, the route then transitions through the green corridor of Beacon Park moving into Minster Pool, before entering the secondary gateway of the Swan Road/Bird Street junction. North of the bridge and the Pool, the pavement widens out to enter the Remembrance Garden, before narrowing once more to cross the bridge.

To aid the diagonal pedestrian crossing of the junction of Swan Road, from Beacon Park to Minster Pool Walk, a traffic table has been created in the area of the junction, however, the crossing is constrained and awkward with poor sightlines and little space on the pavement landing zone to the southeast. Although this has the impression of being a dangerous junction, accident statistics would not support this, although it is heavily disliked and a concern to the pedestrian.

Church Street/Tamworth Street.

The A5127 is a busy road feeding into the city and bypassing immediately to the south along Birmingham Road. To enter the city from the west, the driver would

pull off the A5127, Church Street into Greenhill and Tamworth Street. The whole area of this extensive junction is dominated by traffic and highways infrastructure, with guard rails, crossings, traffic lights and signage set in a sea of tarmac. Once past the George Lane junction, on entering into the city, the setting improves as the scale reduces. Pavements here are very narrow however. On entering the area of traffic restriction, as the highways swings into Lombard Street, St Mary's Church dominates the view along Tamworth Street and the quality of the public realm improves with high quality natural materials and well proportioned delineation of the street.

Trees

Urban trees add great benefit to the communities that live around them. As well as being aesthetically pleasing, they have a positive effect on our environment, our health and well-being, our economy, and exist as a protection for the future.

Trees in our streets and urban spaces help counter the impact of climate change, They cleanse the air, cool the ground, and hold back the pulse effects of heavy rainfall, thereby reducing flood risk.

They reduce stress, beautify the city scene and add value to a city's attractiveness and, therefore, economy.

A well-treed corridor extends from Beacon Park, across Minster Pool to connect to Stowe Pool in the east. Similarly, numerous street trees have been planted within the streets and frontages of the Learning Quarter. With the strong wooded backdrop of Station Road, the city centre is effectively ringed by tree planting. The historic centre of the city itself is, by contrast, hard and constrained for space, providing little opportunity for street trees. Where they are present they make an important feature within the streets and spaces. Notably at the junction between St Johns Street and The Friary, at the entrance to Bird Street Walk along Market Street and the mature tree within the small square north of The Garrick Theatre. These trees create a strong visual break to the architecture, providing a shady canopy in summer and form a magnet to which people congregate. New street trees have been planted within Market Square, which, as they mature, will greatly enhance the focal nature of the place.



Where trees are maturing within the pavement zone they are causing root heave due to compaction and insufficient growing space beneath the paving, lifting the surrounding pavement.



Paving effected by root heave (above)

Minster Pool

The trees to the rear gardens and northern edge of the Minster Pool form a backdrop to the pool and the foreground to the cathedral rising beyond. The softer edge of the northern bank contrasts strongly with the urban park edge to Minster Pool Walk to the south.

The wooded nature of the northern bank and restricted access creates an area of nature conservation value in the heart of the city. However, natural regeneration of elder and rhododendron lends an untidy and unkempt appearance.



Filtered, not screened views of the cathedral (above)

Whilst the yew trees in front of the Cathedral are intrinsic to the place there is a danger that, in conjunction with ivy growing up into tree canopies, they are overly screening, as distinct from filtering views of the cathedral. Over the centuries, numerous artists have painted the Cathedral from around Minster Pool and these views are in danger of being lost.

There is a balance to be achieved here and the trees must therefore be monitored to ensure that aspects and vistas to the Cathedral are not interrupted by overgrown vegetation. This is of particular importance given the views of the cathedral from Minister Pool Walk, Dam Street and Minister Pool Bridge are one of the finest experiences in the city.



Views to the Cathedral are interrupted by overgrown evergreen trees (above, left). Given many artists utilise this area for painting the Cathedral (above, right), vegetation monitoring and control is particularly pertinent.

SWOT Analysis

OBJECTIVES	Strengths	Weaknesses	Opportunities	Threats
A Strong Historic Core	<ul style="list-style-type: none"> • Easily legible, complete and contiguous core areas. • Recognised through Conservation Area status and 'Speciality City' Status. • Compact. 	<ul style="list-style-type: none"> • Medieval 'ladder' street pattern restricts north/south movements to the edges. Little permeability through the core. • Minster Pool should be a great asset for the city centre creating the foreground for the cathedral and strengthening connectivity between historic core and cathedral precinct, but currently is, if anything a buffer and barrier between the two (accepting that this was its original purpose!). 	<ul style="list-style-type: none"> • Bird St Car Park development as a strong link between city and cathedral. • Build on the existing views of St Mary's and the Cathedral. 	<ul style="list-style-type: none"> • Traffic • 'Highways' infrastructure
Complementary & Supporting Uses	<ul style="list-style-type: none"> • Varied, niche existing retailers and food offer gives strong base to spring from. • Speciality city status and cathedral provides destination vitality to the city centre 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Consolidation of various, but complementary uses (cultural, leisure, tourism, retail) to create a 'circuit of destinations'. • Masterplan looking to promote more inner city living. 	<ul style="list-style-type: none"> • Pressures and exigencies on high street retail. • Loss of business confidence and increased vacancies due to Covid.
Welcoming Gateways	<ul style="list-style-type: none"> • Clarity and compactness of the city centre area enables strong gateways to be identified and marked. • Cathedral spires visible from most gateways. 	<ul style="list-style-type: none"> • Excessive space required for traffic movements and conflict with pedestrians at the gateways. • Levels of traffic • Southern entry points particularly challenged and traffic-dominated from St Johns St/Birmingham Rd junction along the Birmingham Road corridor to Birmingham Rd/Tamworth St junction. • Poor signage and wayfinding (particularly south to north from station to cathedral). • Eastern edges of city core flaky and ill-defined, with Reeves Lane and Lloyds Walk eastern gateways from Car parks and open spaces uninviting and in latter case poor perception of safety. 	<ul style="list-style-type: none"> • Birmingham Rd and transport hub improvements, enhance the currently poorest gateways to the city from the south, either by road, bus or train. • The quality and clarity of the built form negates the need for easily dated, inappropriate and quickly tired-looking features to be erected to mark gateways. 	<ul style="list-style-type: none"> • New development blocks visual connections to cathedral • Area demands of transport hub on urban space mitigate against pedestrian and cyclist. • Failure to secure development agreement on Southern Gateway site. • COVID19 - implications for comfort items such as bench seating.
Vibrant Streets & Spaces	<ul style="list-style-type: none"> • A quality, consistent built form, punctuated by striking landmark heritage buildings and set within clearly identified character areas. 	<ul style="list-style-type: none"> • Mish-mash of street furniture in various materials, colours and styles and from various era. • Differing approaches to the design and materiality of the floorscape within the streets and spaces, even 	<ul style="list-style-type: none"> • Increased resident population, brings vitality, pride and 'ownership' of the streets and spaces. 	<ul style="list-style-type: none"> • Failure to secure consensus on prioritising cyclist and pedestrian movement through restricting vehicular access to core areas. • Failing to ensure that the public realm remains a space available to,

SWOT Analysis

OBJECTIVES	Strengths	Weaknesses	Opportunities	Threats
	<ul style="list-style-type: none"> Quality materials and finishes within certain key areas and streets - eg. Market Square. Retail, leisure and destination activity brings a good level of footfall to the city core. Strong existing programme of festivals and events, with organisations in place. 	<p>within the same character areas, prevents a coherency and consistency to the centre, creating a visually disjointed appearance.</p>		<p>and serving all groups within the community.</p> <ul style="list-style-type: none"> Loss of local distinctiveness and sense of place.
<p>Quality Accessible Environment</p>	<ul style="list-style-type: none"> Compactness of city centre. Appreciation of the role and access requirements of a successful 'Speciality' city. 	<ul style="list-style-type: none"> Confusing restrictions within pedestrianised and priority areas. Traffic flows within TRO areas detract from streetscape and ease of pedestrian and cyclist movement. Lack of consistency with signage design and location. 	<ul style="list-style-type: none"> Improved public transport provision and transport hub, leading to modal shift away from the car. Improve facilities and infrastructure for cyclists and pedestrians Improved wayfinding for pedestrians and cyclists. Modern, clean, flexible, real time, public transport systems through and around the city core. New pedestrian crossing points at Birmingham Road corridor 	<ul style="list-style-type: none"> Failure to secure consensus on prioritising cyclist and pedestrian movement through restricting vehicular access to core areas. Lack of achieving the required organisational change to match any cultural shift as the city centre evolves. Tightness of the city grid and ability to accommodate multiple modal movements - walking, cycling, vehicular, access to blue badge parking.
<p>The "Green" and Sustainable City</p>	<ul style="list-style-type: none"> Strong network of linked open green spaces to north - Beacon Park, Minster Pool, Stowe Pool, bring nature into the city. Trees and landscaping contribute to the character of Museum Gardens & Minster Pool and Birmingham Road. Shaded areas to footpaths and cycle routes from some areas of the existing built and natural city environment. 	<ul style="list-style-type: none"> Restricted widths of historic streets across the city and the density of the built form create challenges in increasing tree cover and implementing SuDs. Little tree cover to the south of the city centre. Limited number of recycling bins 	<ul style="list-style-type: none"> New developments sites to the Southern Gateway and Bird Street Car Park provide opportunity to enhance tree planting and SuDs. Reducing the space available to the car could free space for green initiatives within the street corridor. Manage existing trees and plant new and replacement trees to mitigate losses in the last decade. Improvements for wildlife? Enhancement of green infrastructure is multifunctional in both tackling climate/ecological emergencies and serving the needs of the community. Measurement of embodied carbon for infrastructure - future data capture for LDC to improve future projects. Energy generation for signage and external lighting etc. 	<ul style="list-style-type: none"> Reorganisation of, and demands on the street corridors fails to generate space for green infrastructure. Increased maintenance requirements including potential water use and management. Sustainability of the supply chain for materials and street furniture etc and limited ability to alter this within the remit of the Strategy. Requirements for utilities diversions - cost implications

Public Realm Objectives

The National Design Guide is structured around ten characteristics of well-designed spaces and places that work together to create its physical Character, nurture and sustain and sense of Community and work to positively address environmental issues affecting Climate.

The ten characteristics are:

- **Context** – enhances the surroundings.
- **Identity** – attractive and distinctive.
- **Built form** – a coherent pattern of development.
- **Movement** – accessible and easy to move around.
- **Nature** – enhanced and optimised.
- **Public spaces** – safe, social and inclusive.
- **Uses** – mixed and integrated.
- **Homes and buildings** – functional, healthy and sustainable.
- **Resources** – efficient and resilient.
- **Lifespan** – made to last.

These ten characteristics are captured in the following diagram:



With the exception of 'homes and buildings', all of the characteristics would apply to the public realm, so extending these characteristics to Lichfield, the public realm will be designed to:

- Meet the needs of Lichfield as an attractive, distinct and thriving economic, tourist and social centre in the region

- Achieve high quality spaces using durable materials incorporated into uncomplicated designs focusing on the correct balance and proportions of elements within the street
- Encourage innovative design, avoiding pastiche by reinterpreting the historic fabric through the use of contemporary, timeless design
- Avoid street clutter and co-ordinate furniture, signs, posts, bus shelters and lighting to respect surrounding buildings and the overall street scene composition, whilst bringing clarity and continuity to aid wayfinding
- Provide a unifying structure, drawing together the historic and more contemporary elements of the city into a legible whole
- Improve connectivity and integration between areas, celebrating their individual histories as well as realising Lichfield's potential as a 21st Century city
- Promote sustainable transport modes and particularly encourage pedestrians.
- Provide a just and equitable access to areas of public realm which meet the needs of all groups in society
- Enrich the evening economy and offer a safe and rewarding visit
- Be carried out in phases if budgets are limited, rather than compromising quality
- Meet the needs of maintenance requirements and recognise replacement and whole life costs of materials
- Utilise locally sourced natural materials and skills where possible

A more fine-grade level of guidance and of immediate relevance to the heritage-rich city of Lichfield can be found in Historic England 2018, 'Streets for All', and this has been a constant point of reference in drawing together this design strategy.

The successful design of the public realm will be achieved through the involvement of multi-disciplinary design teams including artists, landscape architects, highway engineers, urban designers, lighting designers, as well as consultation with the public, local businesses and user groups.

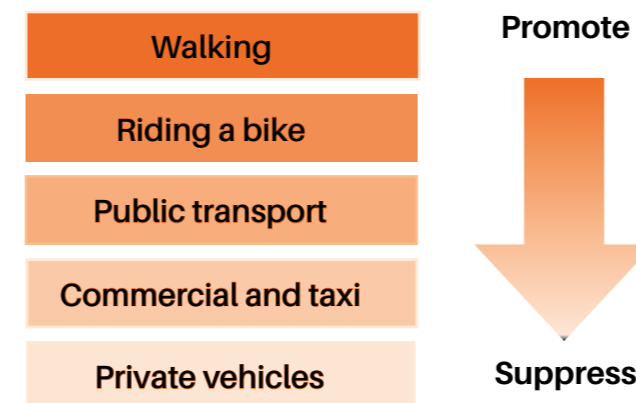
Hierarchy of Street Uses

The compact structure of Lichfield, in common with many medieval settlements, results from their historic function as regional centres for trade and artisanal craft, with the necessary squares, marketplaces and short walking distances. This is also an ideal structure for an urban movement pattern centred on walking and cycling, and encouraging social interaction, footfall and dwell time.

The focus (or return to a focus) on the human dimension in planning our city spaces, placing the needs of the pedestrian and cyclist above those of the private car, would go a long way to meeting the key objectives of the Lichfield District Local Plan Strategy 2015. That is, to create a city that is healthy, safe, prosperous, lively and sustainable.

Developing this principle, Local Plan Strategic policy 2 (SP2): Sustainable transport, includes making provision for "widening travel choices and making travel by sustainable means more attractive than the private car" and the Local Plan document explains that "active travel is part of sustainable transport, it seeks to improve people's physical and mental health by using urban design principles to give pedestrians, cyclists, and users of other transport that involve physical activity the highest priority when developing or maintaining streets and roads. This can mean reallocating road space to support walking and cycling, restricting motor vehicle access, introducing traffic-calming schemes, and creating safe routes to schools and childcare settings."

Effectively the policy creates a hierarchy of travel modes, prioritising space within the public realm to promoting green, active means of travel - walking, wheeling and cycling. This hierarchy is illustrated in the diagram below. However, it must be applied sensibly to recognise the needs of the broader transport and highway network and it is increasingly important to consider the movement of services and goods, not just people. Nevertheless, this hierarchy is a clear statement of the Council's priorities for movement in the city, and this must be reflected in the design of all streets and spaces.



Wayfinding & Movement

The Pattern of Streets

The orthogonal grid of the medieval ladder street pattern, in conjunction with the visibility of the spires of the cathedral and St Mary's Church, enables an ease of mental mapping and wayfinding, particularly from the key gateway of the rail station.



Views of the landmark spires from the rail station (above)
For the visitor arriving in the city at the station, the visibility of St Mary's and the cathedral also enables a ready appreciation of the compact scale and easy distances involved. The immediate impression is that walking and cycling are appropriate and, therefore, encouraged.

However, the reality of moving through the city centre is heavily challenged by the impenetrable nature of development along the cross streets (the ladder rungs of Wade Street, Bore Street and Market Street). This tends to move north-south movements to the perimeter of the historic core along St John Street/Bird Street and Baker's Lane/Conduit Street/Dam Street - the two ladder rails.



the medieval ladder street pattern (above)

A new central route

Our proposal, therefore, is to create a new central route from the station to the cathedral that connects many of the landmark buildings, places and spaces of interest within the city centre. This is perhaps a more intuitive route through the city, which would supplement without replacing the current movement patterns. It would also lock the Birmingham Road development site into the spaces and street network of the city.

This broader proposal would also draw the visitor to the front of the cathedral taking in the well established vista from Bird Street Bridge.



A new central route through the city (above)

Fundamental to the success of this proposal is to advance the ideas from the Masterplan to drive a new connection from Market Street to Minster Pool and develop an extended pocket park to the north of the existing Bird Street car park, creating a city frontage space onto Minster Pool.

The new route would not only address the uninviting nature of Bird Street Walk. But would open up views of the cathedral from Market Street, aiding orientation and the alignment of the route would keep the cathedral central to the view as the pocket park and Minster Pool are revealed.

Minster Pool Circular Walk?

In the only significant change from the Masterplan, we would propose not to adopt the concept of the circular walk around Minster Pool, as this would impinge on the Remembrance Garden, would cross private land and impact on the ecology to the north of the pool. Rather, we would wish to promote and enhance the existing circular route from Minster Pool Walk up to and through the Cathedral Precinct via Bird Street and Dam Street. Stakeholder and public consultation would suggest that this decision would be well-supported.



The revised Minster Pool circular walk (above)

Gateways & Entrances

Making gateways of our car parks

There are three multi-storey car parks in Lichfield that border the city centre to west, east and south and to help reduce traffic movements within the city centre we have to make our edge of centre car parks attractive and easy to use. These car parks are only a few minutes walk away from the historic core of the city and must become the gateway for the car user.



Multistorey carparks - gateways to the city centre (P) (above)

A separate study is looking at how the car parks can themselves be improved, but it is the aim of this study to explore how once the car is parked, the journey to the city centre for the pedestrian is clear, safe and attractive.

As discussed later in the chapter, this starts with providing good information online to the visitor before they embark on their journey, but on arriving to the city, the car parks need to be clearly signposted. These car parks are well located for three of the four main routes into the city,

The Friary Car Park

The Friary car park is 240 metres from the junction of Bore Street and St John Street, approximately a three minute walk. However, it is perceived as being distant from the city centre. We need to improve the connectivity between car park and the city centre, through improvements to the pedestrian connections along The Friary

A important secondary connection to the heart of the restaurant offer on Bird Street exists from the north-eastern exit of the car park to Swan Road and along Sandford Street.



Connections to The Friary car park (above)

Lombard Car Park

The area of Lombard Car Park borders the major open space of Stowe Pool, but the most direct connection to the city centre is through the somewhat fractured urban structure around Cross Keys and then the tight and (particularly after dark) claustrophobic alley of Lloyd's Walk.

Whilst there is little significant improvement to the Cross Keys corridor that can be achieved through public realm interventions alone, there are moves that can be made to improve Lloyd's Walk.



Connections to Lombard Car Park (above)

Birmingham Road Gateway Car Park

Accessed directly from Birmingham Road, adjacent to the Three Spires shopping centre and located within the Birmingham Road Gateway site, this car park is ideally placed for shoppers and visitor to the city centre arriving from the south. If a new car park is to be developed on this site it must allow pedestrians easy access into the city centre.

The Rail Station

It is important that the Birmingham Road Gateway development's linkages with Lichfield City Station becomes the start point for pedestrian and cycling routes around the city to promote active travel and provide a hub for the active travel network. A cycle hub could be developed within Station Square, providing secure cycle storage, information, bike hire and repair.

As discussed below, the visitor should be able to orientate themselves and pick up all the information they might require for an enjoyable and successful stay in the city.

The design of the Birmingham Road Gateway should ensure that views of the cathedral and St Mary's church are retained and framed from the new station square to aid immediate orientation.

Wayfinding Information Systems

The user experience will be dramatically enhanced by taking a whole journey, coordinated approach to online information, services and physical elements. The user, whether they be a visitor or resident, will gain a greater understanding of the city and have a more enjoyable experience when provided with consistent, high quality information at all stages of the journey.

Presenting the city centre as a singular composition reinforces the sense of unity and continuity through the streets and spaces. Grasping and carrying an impression of the full expanse of the city centre as you move around, reinforces the mental map - connecting destinations and aiding orientation.

Lichfield Visitor Information

Develop and extend the existing Visit Lichfield website. This website is frequently a visitor's 'first point of contact' experience of the city, and must capture the principles of the whole journey and total composition as discussed above, and reflect changes to the public realm, routes and new developments.

This digital gateway should be tailored to user requirements and create an enhanced experience in terms of guiding, journey planning, attraction and destination finding. The website will capture the visitor before they

- embark on their journey to the city and will:
- Introduce the unique visual identity of the city to the visitor at the start of their journey experience - as they plan their journey online.
 - Provide a geographic overview of the city to reveal Lichfield's unique setting, walkable scale and main visitor attractions.
 - Extend the overview to present an understanding of the development of the city through the ages.
 - Provide visitor itinerary planning tools - to reveal the city's offer and encourage longer stays.
 - Consider an interactive mapping suite to create a personalised themed maps and guides of the city.

Walk map Review and amend the free printed visitor map for pedestrians which can be distributed through main points of arrival, the new transport interchange, tourist information centres, attractions, destinations, accommodation providers, universities and other third parties.

Content to include:

- Visitor information.
- Attractions and destinations.
- Interpretation.
- Cycle and pedestrian routes.
- Transport connections.
- Content indices.

Themed maps/guides Enhance and extend the range of themed maps and guides to connect attractions, destinations and points of interest. To be provided in multilingual versions, themes could include:

- heritage and culture,
- shopping,
- Lichfield after dark,
- city centre walks and parks and gardens.

Available in printed format from main points of arrival, transport interchanges, tourist information centres, attractions, destinations, accommodation providers and other third parties.

Digital information services In conjunction with the signage strategy, develop a digital information strategy for the provision of information services to static digital information points and dynamic hand held mobile devices. Develop contextualised mapping information for interactive online and on-street digital use. Review and audit technology to adopt a future proof approach to providing, managing and maintaining visitor information that can be accessed by hand held mobile technology.

Arrival points Extend and coordinate information signs at key points of arrival including Lichfield City Railway Station and primary car parks, to provide welcoming visitor information and point of orientation for navigation and onward journey planning. Information to include:

- Welcome to Historic Lichfield.
- An overview or prospect map to allow users to view the full extent of the city. Users will then be able to understand its distance, structure and physical relationship of destinations. In a simplified form, this composition will be a consistent element that remains with you as you move around the city.
- Instructions on how to get around the city.
- Onward journey planning information.
- Primary visitor information including primary attractions and destinations and interpretation, pedestrian routes and transport connections.
- Content indices.

Pedestrian signs Develop pedestrian information signs to be located at key decision making points in the city centre. Information will include:

- A street level of mapping, for their next destination/ point of interest, that will enable people to navigate their next step through the city and find nearest destinations or facilities.
- A map of the extended city centre for orientation within the wider context of the city.
- Primary visitor information including primary attraction and destinations and interpretation, pedestrian routes and transport connections.
- Content indices.

Shopping directories Develop a range of information directories to provide visitors with detailed information about their immediate area.

- Shopping directories to allow shoppers to find specific destinations quickly or to identify the full extent of retail options available.
- Food and drink directories.
- Information directories at key destinations and attractions.

Interpretation points Develop a range of interpretation signage such as historical plaques, interpretation signs, city vista displays and public art interpretation, to provide information about Lichfield to enhance a visitors experience through engaging, revealing, understanding, discovering and learning.

Interpretation products will include:

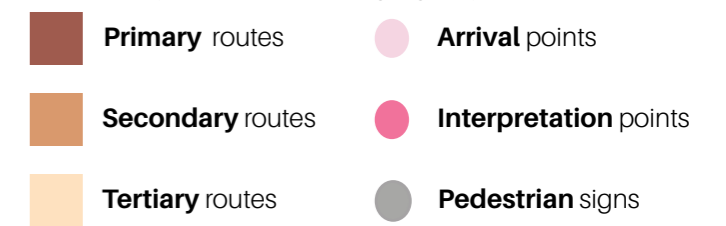
- Detailed guides, indexes or interpretation will be provided annotating an elevation of the view. Information will help users explore the area in greater detail.
- Historical interpretation.
- Reveal further points of interest in Lichfield.
- Restore incised lettering of street names.
- Links to further information.

Hierarchy of Pedestrian Routes

The plan below illustrates an assessment of the routes and spaces of Lichfield and describes a pedestrian route hierarchy, centred on the new proposed medial route through the city. Visitor Information Points are also shown.

This process is not static and relies on continued assessment of current and future development sites in the city to ensure these are connected into the network. The primary pedestrian routes and secondary connecting routes link arrival points and destinations in the city, guiding the location and orientation of the four basic types of information elements. The indicative location of these elements form a core network which will, in time, be extended into new development areas such as the Birmingham Road Site.

The hierarchy of movement and signage Key (below)



The hierarchy of movement and signage (above)

Hard landscape elements: paving and street treatment

A number of character areas within the city centre have been identified within the Masterplan. All too often, recognising a diversity of character is met by one of two responses: a standard approach to every part of the public realm; or a 'bespoke' approach to each of many sub-areas. The former can mask the character it should be celebrating; the latter leads to an uncoordinated patchwork of elements that often date very quickly. Finding the appropriate ground between these extremes is one of the purpose of this Public Realm Strategy. However, it would not be our intention to apply a different range of materials and elements within each of the city quarters and we strongly lean towards the consistency of a common palette of materials and fixtures, applied sympathetically to the context.

Wall to wall paving solutions affect the proportions of the street and diminish visual interest within the ground plane. This may be appropriate within a setting of contemporary buildings but does not sit as comfortably within an historic street pattern. For this reason, a pavement zone will be identified within the historic streets, regardless of the presence of upstand kerbs, or the kerb height. This approach is supported by Historic England in their guidance document 'Streets for All', where they call for maintaining kerb-lines to preserve the historical form of streets.

Where the carriageway is used for unrestricted vehicular access, it is important to keep a kerb height of at least 60mm and to use different materials to clearly define the separation.

A further advantage of this principle is that within pedestrianised areas, the 'pavement' zone can also delineate the area of shop or café spill out onto the street, maintaining the 'road' zone for pedestrian movement. Again, a principle supported by Historic England.

For both contemporary and historic street façades, as well as providing shade, shop awnings can enliven the street scene and greatly assist in humanising the scale of the street by capturing ground beneath the awning for the pedestrian to stop and linger. It is also a useful device to delineate spill out space for cafés and restaurants.

Surface Materials

We will commit to the use of robust, natural paving and materials across the public realm, applied with a view to whole life costs, which encourages the reuse of locally sourced materials wherever possible. This use of indigenous materials applies a contextual grain to the streets and spaces, which should be continued to the detail of their application. There are a number of existing street

details in kerbs, channels, cross overs and back of paving infill that lend a continuity, scale and distinctiveness to the public realm and should be extended or reinterpreted across the city centre area.

General Guidance

Workmanship

The key to successful paving is threefold, quality robust materials, appropriate detailing and a high standard of workmanship. The standard of setting out and laying of the paving is key to a long-lasting quality finish. An experienced laying team would be constrained by overly detailed layouts and what they require is a series of principles that the mason can follow on site.

Consistent application is important for maintaining a clean aesthetic. Footway surfaces should be firm, slip resistant, low in reflectivity, laid in a manner which is comfortable underfoot, and minimises the risk of trip hazards and is well drained.



Construction

Structural design depends on the level of everyday use, the risk of vehicle overrun and the existing ground conditions. The relevant standard local guidance must be used to design the pavement.

In trafficked areas, where vehicles are prone to mount

the pavement it is not necessarily appropriate to install lines of bollards which will only add to the street clutter. Paving slabs laid on flexible base courses will inevitably be damaged by overriding vehicles. Where vehicle overrun is likely, paving slabs should be laid on a concrete base and tapped down to ensure continuous support with no air pockets.

Laying patterns

Small-module paving on footways is best avoided unless there is a historical precedent. It tends to dominate the street, especially where traditional footways and kerb lines have been removed. It may sometimes be better to use concrete flags or asphalt rather than fragment the floorscape. Small modules are best confined to the carriageway and pedestrian crossing points, and may not be suitable for areas highly trafficked by HGVs, particularly in areas of braking and turning.

Paving should always be laid perpendicular to the line of the kerb in staggered rows.

When specifying construction material choices it is important to give consideration to likely needs for repair and maintenance, including sourcing replacement materials. This is obviously simplified by limiting the palette of materials.

Joints and Cuts

Cuts to slabs should be used to achieve changes in gradients. Generally the number of cuts should be kept to a minimum. Residual slab lengths of less than 150mm should be avoided. Where two footways intersect at awkward geometries, paving should be cut to ensure a clean aesthetic and respond appropriately to the road hierarchy and the building line. A preferred approach is to cut the paving units in a radial, fan pattern. Generally this approach should be reserved for wide or long corner radii and as a response to the adjacent building architecture, and where a maintenance strategy has been agreed. A cap stone may be required at the inner radius and double units can be used on tight radii towards the inner radius.

Mortar

Where it is used, mortar has a significant impact on the aesthetic quality and overall appearance of the paving surface. Good edge restraint on both sides is essential to prevent spreading. Where footways do not abut a kerb or existing wall, an edging is required. Clean joints at kerb edge and back of footway are required by careful detailing and cutting pre-construction.

Mortar infills must be avoided at the backs of kerbs, at building façades and around utility covers. Infills should be kept to a minimum around posts and special core drilled

flags are recommended to ensure good fitting.

Dropped Kerbs

The number of diagonal cuts required to attain the level change around the dropped kerb should be minimised and should not leave small segments. Vehicular overrun in these locations should be anticipated and the construction and detailing should be carefully undertaken to prevent the paving quickly failing.

Alternatively, quadrants can be used to return the kerb into the footway forming a single gradient between levels avoiding any diagonal cuts.

Special Kerb Types

The use of special kerbs should be considered in certain circumstances to improve appearance, assist installation and ultimately, facilitate movement within the street.

Considerations would include:

- Use standard quadrants at all 90 degree external junctions.
- Typically, ramped kerbs, are only required to ease the transition of wheels (prams, wheelchairs, trolleys etc.) over the up-stand.
- High containment profiled kerbs should be avoided in places with a high 'place' value.
- High access kerbs should be installed where practicable at bus stops.

Cycling Delineators / Demarcation

Up-stand kerbs separating cycle lanes and tracks from pedestrian areas should generally be avoided unless they are the result of retaining an existing carriageway kerb.

A standard pre-formed delineator (photo) should be used and if vertical separation is absolutely necessary then a low (maximum 60mm) splay kerb should be used.

Tactile Paving

To be effective, tactile and hazard warning paving materials must be applied in the correct form and in the correct place, to comply with the requirements of their intended function. However, they must also be sympathetic to the adjacent surfaces and character of the surrounding area. The city centre is a designated conservation area and therefore a tactile surface should be employed that blends rather than contrasts with the surrounding materials.

Brass studs with non-slip surfaces provide a contrast in colour and texture without being visually intrusive. Corduroy and tactile paving can be supplied in natural stone to suit the adjacent material.

Cutting

On site cutting of kerbs should be avoided where possible.

Where necessary, all cuts should be neat and tidy, fitting adjacent outlines.

Quality control of paving

A sample panel should be constructed at the start of the construction phase to establish specified standards of workmanship for the scheme, acting as a quality benchmark. Typically a sample panel area would cover around 30 square metres of footway and represent most features in the build, including a kerb edge, building line, inspection covers, a radius and at least one dropped kerb.

Street furniture elements

There is so much in our streets that shouldn't be there in the first place; or that has a theoretical function that it is not fulfilling; or which is fulfilling a useful function but could be better-placed. For the first of these groups, remedial action requires little more than the allocation of modest resources to clean, tidy, remove or enforce. For the second - such as the removal of guard-rail that are serving no practical safety purpose - the justification for removal will need to be properly investigated and documented. For the third group, signs and other useful street kit can often be moved out of the main walking desire line or combined on one post or column, rather than two or three.

The city currently contains a myriad of different products, and whilst each may do its specific task adequately, there is little consideration to their collective impact.



To realise a range of elements that sympathetically responds to the city's character and design aesthetic, it is recommended that the certain general principles are followed:

- The street furniture selection should be a coordinated contemporary range implemented throughout the city centre. Street furniture should not reflect any heritage style or imitate a point in history;
- The materials must be durable, able to resist vandalism and be easily maintained. Ease of replacement must be considered;
- The designs should be simple, stylish and elegant capable of accompanying a range of settings;
- The placing of the elements must respect pedestrian flows allowing unimpeded access along the footways. Equal consideration should be given to the proposed function and the needs of disabled and less able users;
- The design and the materials should be contemporary, but reflecting a timeless quality.



To assist with improving legibility and engendering a sense of place, subtle modular variations to the standard items could be introduced.

As with the signage, naturally coloured materials should be employed for robustness and authenticity, however, coloured detailing could be incorporated in the form of steel end brackets, infill strips or illumination to reflect the quarter in which the furniture is situated.

Possible colours to complement the tones and hues of Lichfield could include:

	Pale green RAL 6021
	Cement grey RAL 7033
	Signal yellow RAL 1003
	Pigeon blue RAL 5014
	Anthracite grey RAL 7016

Pop-up power and water points

Pop-up power and water points would be located within areas of the street and within public spaces that are suitable to house events, markets and festivals. The use of these facilities would remove or reduce the need for dirty and noisy generators and water bowsers and pumps. Water points would also facilitate cleaning during and after events.

EV Charging Points

There are currently a few EV charging points around the city and located within The Friary car park. These need to become more prevalent as the number of electric vehicles increases on our streets and to encourage the uptake of this clean technology. The design and location of these elements requires the same level of consideration as all other aspects of the public realm, to avoid obstruction and clutter.

The Furniture Zone

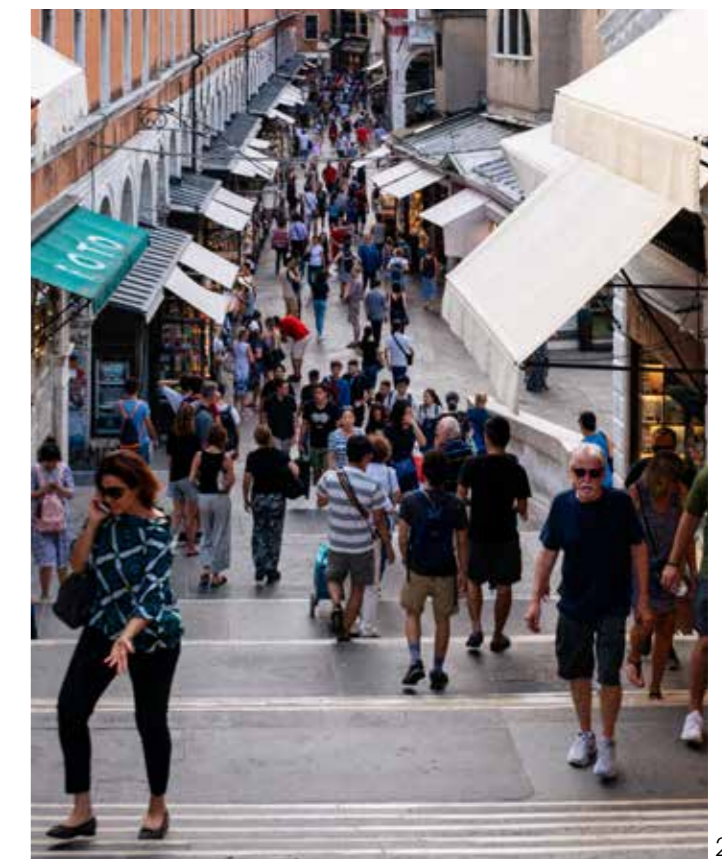
The footway width is created to allow for effective width for pedestrians, and as such footways must be kept clear of any clutter. Any necessary items of furniture within a footway should be organised within a furniture zone at kerbside (where a kerb exists), to prioritise space for pedestrian movement and allow for improved inclusivity and accessibility.

Shop Frontages

The quality and character of the shop frontages across the city contribute immensely to the overall quality of the public realm. The use of colour and typeface, the scale and proportion of glazing and signage, retaining or revealing historic facade elements and continuity of building lines contribute significantly to the overall consistency of the street scene.

Awnings can enliven the street facade and capture space in front of shops and businesses, reinforcing the movement and use patterns, suggesting a place to pause or linger; but they need to be sympathetic to the general appearance, scale and treatment of the public realm.

Specific guidance on Shop Fronts and Advertisements is provided in Lichfield District Council's Historic Environment Supplementary Planning Document (page 29 - 32), but should be read in the wider context of the guidance within the document.



Streets and Spaces

Introduction

The development of concepts defining the materiality and appearance of the street scene within the various quarters of the city centre is derived from the function, qualities and character of the area and of the particular street. Whilst we are advocating a consistency of materials across the entire city centre, with subtle variations to finish, pattern and unit size, these can be applied uniquely and distinctively in response to their immediate context.

So, unsurprisingly, and with a few minor deviations as identified below, the approach to the design of the public realm across the city centre responds closely to the delineation of the four Quarters identified in the Masterplan.

Public Realm Projects

The following section of the report outlines the approach to the treatment of the streets and spaces that make up the public realm of Lichfield city centre. Individual projects, defined by the street or open space, are illustrated in figure 6 within the Appendices and numbered as below.

Cathedral Quarter

The ultimate responsibility for the public realm of the Cathedral Close is outside that of the Local Authority and so the following is primarily observation and recommendations that could be incorporated either through collaboration between the parties or independently by the Cathedral.

The materiality of the Cathedral Quarter is already of a high quality, contextual and complementary to the palette of materials proposed for the wider city centre. Little change is therefore envisaged to paving, kerbs and channels, although there is a need to review materials in certain areas to more robust finishes to withstand the pressures of vehicular overrun and heavy foot traffic.



Cut stone drainage channel within pavement - Cathedral Close

It is important to retain and replicate authentic details that provide character to the street. The cut yorkstone dished channels that run from downpipe to kerb channel across the footway would be an example.

Similarly items of furniture are frequently of heritage value, well designed and proportioned and should be retained. However, certain elements of street furniture need addressing to remove clutter and simplify the scene and here it is hoped this would continue the city wide approach; for example, signage, bollards and lighting.

Cathedral Quarter Materials

Footways	Yorkstone paving (riven) 500-700mm coursing x random length
Kerbs	Yorkstone 180mm wide x 125 high x random length
Channels	River cobbles set in mortar with black granite cube edging.
Carriageway	Fibredec or similar
Shared Surface	Yorkstone sett, random coursed.

Market Quarter

As described earlier, the streets within this quarter centre on, and radiate from, the urban block containing St Mary's Church, The Corn Exchange and the Market Square. This central hub, therefore sets the precedent for street surfacing materials within the quarter (and across the city centre) and the recent works to the public spaces around St Mary's has established a palette of high quality, predominantly natural materials, not only appropriate to the historic core areas, but also, in modified finish and format, to new development sites.

For this study, we are working on the assumption that traffic restrictions will be more stringent, extensive and enforced that is currently the case across the core city centre area.

Market Quarter Materials

Footways	Yorkstone paving (flame finished) 500-700mm coursing x random length
Kerbs	Yorkstone (sawn) 250mm wide or black/pink granite 140mm wide x various heights x random length
Channels	Dark grey/black granite 250mm wide x random length
Carriageway	Random coursed tumbled concrete block, multi
Shared Surface	Yorkstone sett, random coursed.

Projects:

1. Market Square/Breadmarket Street/Bore Street/Conduit Street/Tamworth Street

With the exception of the stretch of Bore Street between Breadmarket Street and Tamworth Street (Bore Street East), the existing, recently laid paving to these streets conforms to the overarching principles, quality standards and the route hierarchy, and would be retained. Certain areas of damaged paving would be repaired.



Natural stone paving and tegula carriageway on Bore Street

As with all the other projects outlined, however, to achieve a consistency, clarity and continuity across the public realm, the cross-city schemes for lighting, wayfinding, signage and street furniture would be implemented within these streets and spaces, replacing the existing provision.

2. Bore Street (East)

This short stretch of Bore Street between Breadmarket Street and Tamworth Street, is nevertheless an important part of the city centre public realm, forming the southern side of the historic central block, with Conduit Street and Baker's Lane (Three Spires) also feeding in to it. New paving conforming to the proposed palette surrounds this section of road, highlighting the condition of the monotonous and tired, concrete block paving that currently exists.

The proposal would be to bring this section up to the same standard as the surrounding public realm, through new paving, extending the Market Quarter paving palette. Paving would be kept flush across the width of the street, but channels and a change in material and module size from the pavement to the carriageway, would delineate the streetline. The line of the existing drainage channel would be retained and enhanced.



Concrete block paving on Bore Street (east)

The paving extends beneath the under-croft of the shops to the south of the road, and the new paving would extend into this area, with careful cutting around the pillars.



The under-croft area on Bore Street (east)



Bore Street East- dashed line indicating the threshold where paving changes from stone to concrete.

3. Market Street

A key retail street, Market Street is lined by shops and cafés, a number of which spill out onto the street. The existing monotonous concrete blocks would be replaced with the proposed palette. A new delineation of the street form would be established, with channels and a differentiation in paving module between footpath and carriageway, defining the area for tables and chairs. Kerbs would be flush, and the line of the channel would be strongly defined to accentuate the line and visual continuity of the street.

The existing trees and seating area would be retained but enhanced with new materials and fittings. Cycle parking would also be provided in this area. With the development of the Bird Street car park site, and a new Bird Street Walk connection onto Market Street, this would create a prime place to meet, rest, re-orientate and just watch the world go by.



Concrete block paving on Market Street



Eastern end of Market Street, with existing Bird Street Walk

4. Bird Street Gateway

The diagonal cycle and pedestrian route crossing from Beacon Park into the city centre occurs where traffic is turning northward from Swan Road into Bird Street, but also southward onto Bird Street to access the Bird Street car park.

This is also the location where Bird Street crosses the relatively narrow listed bridge at the head of Minster Pool, so the footpath to the east of Bird Street is narrow, with opportunities to widen curtailed by the bridge structure.



The narrow pavement and awkward crossing at the Bird Street/Swan Road junction

To the east of the bridge is the proposed alignment of the primary pedestrian and wayfinding route between the historic core area, Minster Pool and the cathedral precinct. It is important, therefore to maximise available space for the increased pedestrian flows by widening the footpath into the road. At the same time we are proposing to reduce the traffic speed and create a larger traffic table from west of the junction and up Bird Street to past the turning into The Close and the cathedral precinct.

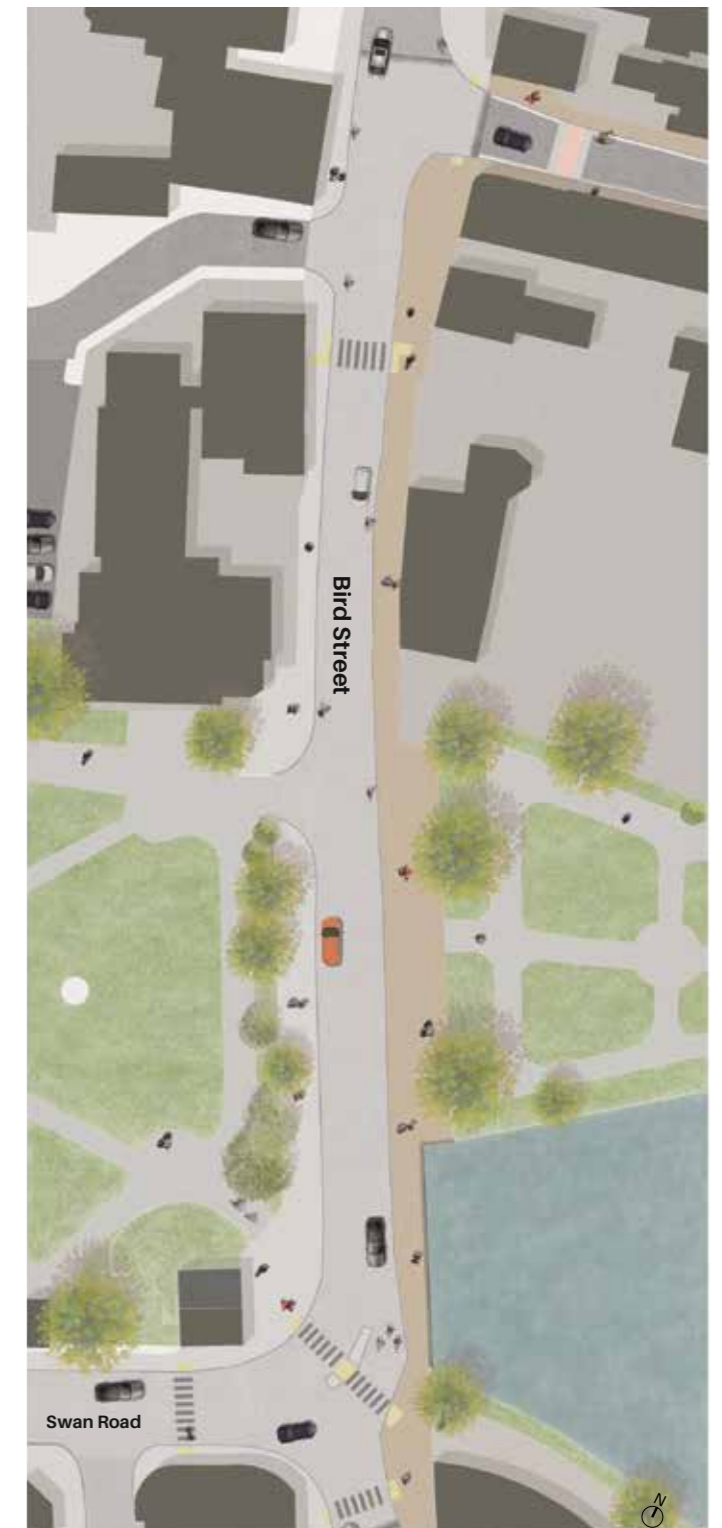
The traffic table would be in multi block paving to indicate to the motorist that he is entering and driving through a heavily pedestrianised area and reinforce the proposed



Paving and carriageway in natural stone and concrete multi block

speed restriction of 20 mph.

The diagonal crossing of the traffic table from the park would be strongly delineated with a adequately dimensioned refuge between the two traffic lanes.



Bird Street - Swan Road to The Close

5. Bird Street/Sandford Street/Car Park Entrance

Bird Street - Bird Street contains the primary food offer in Lichfield, lined with cafés and restaurants, frequently spilling tables and chairs out onto the street. To support the principle of delineating the pavement zones, the area into which outdoor eating extends, is contained by the channel that marks the carriageway. Defining the line of the road is also useful for safety, as although restricted to certain vehicular uses, traffic is still fairly regular on the street and a clear definition of 'highway' enables both driver and pedestrian to understand how to avoid each other.

However, the existing engineering brick paving used in Bird Street is failing, with channels units being replaced by concrete, areas of damaged paving being repaired with tarmac, and significant occurrences of the paving pumping under traffic loading, causing the integrity of the sand bed and jointing to fail.



Red and blue engineering brick used on Bird Street

The strong colours of the red and blue engineering bricks enable a clear differentiation between the carriageway and pavements along the street, but the colours are somewhat strident and the contrast marked, detracting from and occasionally clashing with the colours and textures of the architecture. Adoption of the proposed materials with flush kerbs and channels would present a more robust and visually sympathetic streetscape, but retaining the zoning of the existing materials.

Sandford Street - The proposal is to improve the signage, paving and road crossings along the route, but particularly to extend the pedestrian treatment of Sandford Street past the Horse and Jockey and up to the road junction at Charter House. This should include pursuing the replacement of the lighting columns with wall-mounted fittings and removing or replacing the heavy, aging timber bollards.



View east along Sandford Street

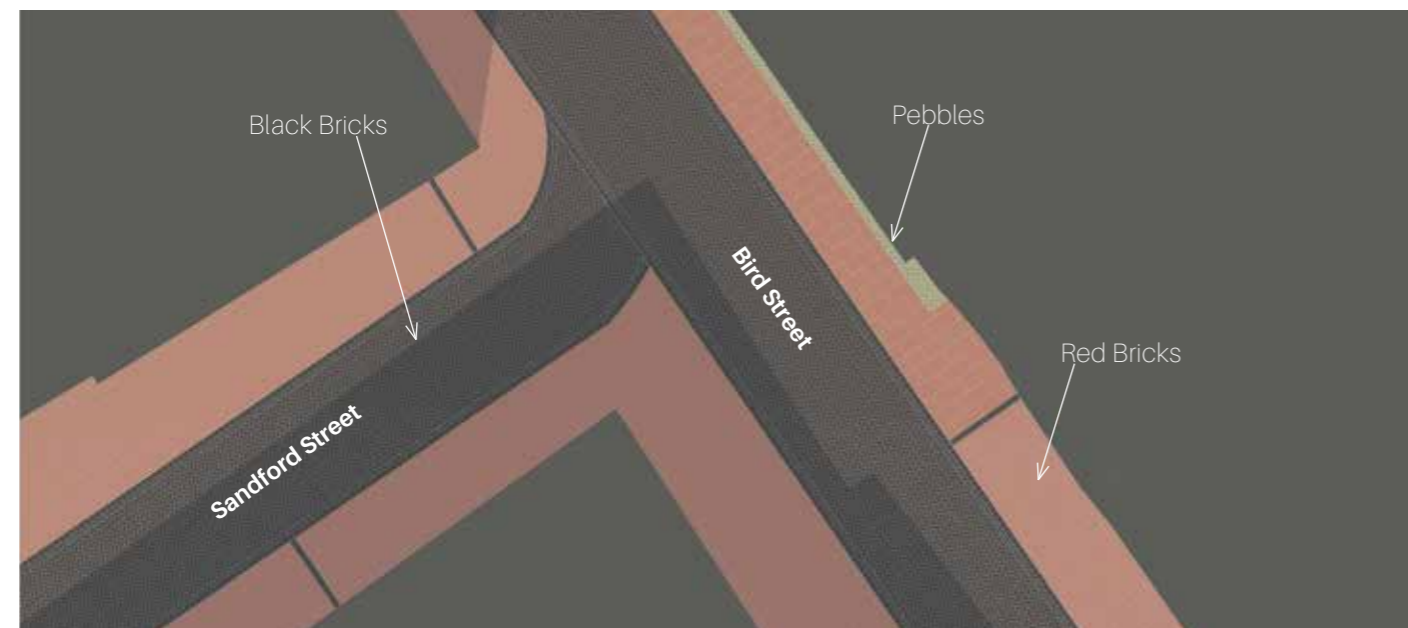


Illustration of Bird Street/Sandford Street existing paving

6. Dam Street

A secondary retail street, with a greater occurrence of cafés and restaurants than the retail core. Dam Street is part of the eastern rail of the ladder street pattern and directly connects the Market Square with the Cathedral Quarter. The street would be treated in a similar manner to Market Street with quality materials defining a pavement and carriageway zone centred on a strong channel line. Being a pedestrianised street, kerbs again would be flush.



Northward along Dam Street to Cathedral

The cross city pedestrian and cycle route flowing through Beacon Park and along Minster Pool Walk, crosses Dam Street to the east of Minster Pool and this junction is marked by Speakers Corner. This is an important, sunny, open pedestrian intersection, where people naturally gather and with great views of the cathedral over the Pool.

From here, the route continues either northward into Cathedral Close, or east ward along Reeve Lane to Stowe Pool. Cycle parking and seating would, therefore, be enhanced in this area.

Feeding off Dam Street to the east is the transition zone of Cross Keys, which is connected to the core area by Reeve Lane to the North and the narrow alley of Lloyd's Walk feeding into the square to the south.



Speakers Corner, Dam Street

Streets and Spaces

7. Lloyd's Walk

To improve the experience of entering the historic core of the city and overcome the perceptions of safety inherent in this narrow alley that feeds into Market Square from Cross Keys and Lombard Street car park, it is necessary to address the causes and issues.



The narrow and uncomfortable Lloyd's Walk alley

A combination of artwork and lighting strung between the buildings could humanise and present a brighter, safer route.



Art and lighting working together

The blank brick wall would be transformed by the inclusion of artwork and softened by clothing in a green wall. The utilitarian galvanised palisade security fencing should be replaced with a more appropriate barrier. Importantly, discussions should be held with the landowners to see if it would be possible to drop the height of the brick wall that borders the car park to maintain clear sight lines along the alley and remove the area concealed from view from the entrance of the alley when approached from the car park to the east.

Bird Street Car Park

As described in chapter 5, for reasons of wayfinding and to open up a new central route through the city centre, the Masterplan proposal to redevelop the Bird Street Car Park and the B&M store on Market Street, would be supported. This move would address the key structural issue of the void at the heart of the city and create a brand new civic space, whilst also removing the narrow and intimidating Bird Street Walk.



This heart-space, fronting onto Minster Pool with the iconic backdrop of the cathedral, would become the Living Room of the city - where the community congregates to celebrate, relax and enjoy.

Any new build elements within the Bird Street Car park development should include green roofs and in open areas in the scheme tree planting should be maximised. The new route from Market Street through the car park site would lead to an enlarged and improved Minster Pool Gardens and would provide glimpsed views of the cathedral as a reference point, but retain the intimacy and enclosure of the historic core street pattern. Active frontages would provide animation and with lighting and clear sightlines would enhance the sense of personal security.

8. Minster Pool Walk and Gardens

Minster Pool and Gardens is a central feature of the city. A further proposal would be to float a permanent stage on the northern bank of the pool, on axis with the new approach path and central to Minster Pool Gardens. The stage would be accessed with necessary permissions from Dam Street and would be for occasional use during festivals and celebrations.



Impression of Minster Pool and Gardens as frontage to the potential Bird St car park Masterplan development.



A floating stage on Minster Pool for events and as an eyecatcher

Streets and Spaces

9. Reeve Lane

The intention is to respond to and extend the green corridor or 'green lung' that runs west/east through the city from Beacon Park, through Minster Pool and onto Stowe Pool. Reeve Lane continues and connects to the national cycleway and footpath that runs to the north of Stowe Pool, and to Cross Keys that borders Stowe Pool to the west and runs southward to the Lombard Street Car Park.



Reeve Lane and the National Cycle Route that runs to Stowe Pool

Mainly a walking and cycle route, new tree planting and materials would draw the countryside right into the city and extend the qualities of a country lane along Reeve Lane up to Dam Street.



Reeve Lane - extending the countryside into the city

Reeve Lane Materials

Footways	Yorkstone paving (riven) 600mm coursing x random length (laid to north only).
Kerbs	Flush Yorkstone 250mm wide x 125 high x random length
Channels	Dark grey/black granite 250mm wide x random length
Carriageway	Fibredec or similar
Shared Surface	Yorkstone sett, random coursed.

Southern Gateway Quarter

Southern Gateway Quarter Materials

Footways	Yorkstone paving (diamond sawn) 500mm coursing x random length
Kerbs	Yorkstone 180mm wide x 125 high x random length
Channels	Concrete
Carriageway	Bitmac/concrete block
Shared Surface	Tumbled concrete setts, multi, random coursed.

Three Spires

In a similar context to the Cathedral Close, Three Spires Shopping Centre is not within Local Authority ownership and therefore, the control and responsibility for the design of the streets and spaces.



Three Spires - the historic Baker's Lane

However, although fronted by contemporary retail architecture, the Three Spires Shopping precinct follows the historic line of Baker's Lane, which in turn formed part of the eastern 'rail' of the medieval ladder street pattern. Also, in terms of the relationship to the historic core of St Mary's Church and the Market, Baker's Lane is a spoke radiating from this central hub, similar to Bore Street, Dam Street, Market Street and Tamworth Street. The section of Baker's Lane between Bore Street and the arcade leading to the theatre is also a part of the proposed new central wayfinding route through the city.

The treatment of the street, including street furniture, should respect this historic and structural framework and preferably present a continuity of materials. The design and application could subtly differ with the street pattern of road, kerb and pavement less defined and approached in a simpler, more contemporary manner.

10. Wade Street/Castle Dyke/Frog Lane

Situated within the Southern Gateway Quarter and functioning as residential streets with defined highway and unrestricted vehicular use, whilst also providing access and servicing to existing commercial and business properties. These access functions could increase as the Southern Gateway Development comes on stream. The footway and shared surface materials should be consistent with the natural palette elsewhere with the quarter, but the road carriageway would be macadam tying into St John's Street. The area of public realm around the Garrick Theatre will become a critical stepping stone between the Southern



The predominantly residential Wade Street looking towards the Three Spires Shopping Centre

Gateway Development and the historic core. At the moment, the frontage is dominated by the road and traffic on Castle Dyke, which if calmed and the roadway narrowed and resurfaced, creates the opportunity for a shared surface, with activity spilling out from the theatre and café, and new trees reflecting and extending the existing open space to the north, which in turn, feeds into the arcade entrance to the Three Spires.



Castle Dyke - the forecourt to the Garrick Theatre

Southern Gateway

Similar to the Three Spires Shopping Centre, the Gateway development site will be contemporary, but sympathetic to the architecture of the historic city. The treatment of the public realm should follow this lead, so the same palette of materials would be used as within the Market Quarter, but applied in a more contemporary manner in terms of finish and laying pattern.

Wherever possible, new built elements of the development should include green roofs to mitigate the relative paucity of greenspace within the city core and suitable space should be found for urban tree planting within the streets and spaces.

To assist with wayfinding, the vistas towards St Mary's and the Cathedral spires from the station forecourt should be retained in the design and layout of the blocks and streets making up the new development.



View from station forecourt to St Mary's and the cathedral

There is also an opportunity to create a new link through the Council offices garden from Frog Lane to St Johns Streets, thereby opening up a new greenspace.



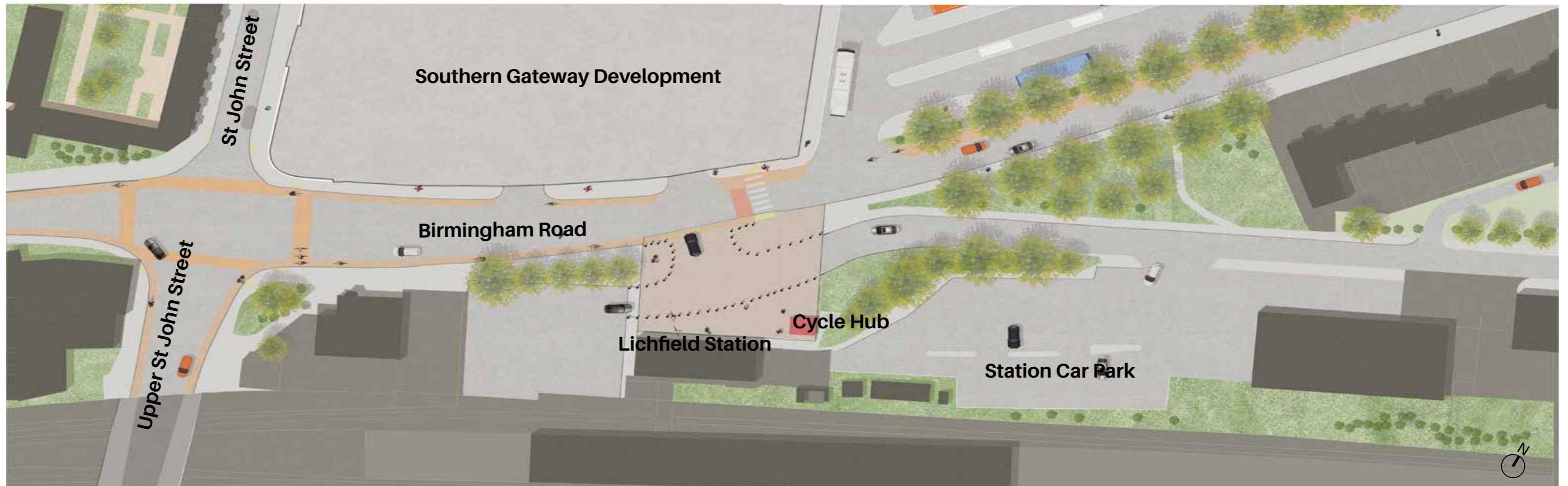
Potential new route through Council Offices Garden from St Johns Street to Frog Lane

11. Birmingham Road/St Johns St and Greenhill Junctions

The scale of development varies considerably along the road from the bus station and the Three Spires multi-storey car park facing residential properties. The width of the highway, dominance of the traffic and expanses of tarmac are also visually harsh and uncomfortable for the pedestrian and cyclist.



Vehicle and highway dominated views along Birmingham Road



Birmingham Road (west) centred on the Railway Station

The proposal is to create space for the cyclist and pedestrian, reduce the carriageway widths and slow the traffic, and develop corridors for avenue tree planting and raingardens. The intention would be to use the landscape of the road corridor to unify or mask the disparity of scale of development and eventually, as the Southern Gateway development comes to fruition, create a central spine for the Quarter.

The proposals would also enable immediate access to a cycle network around the city, enabling the development of a cycle hub at the interchange, and an easier pedestrian crossing from the rail station into the city. The Heart of England Way also crosses Birmingham Road. Improvements to the rail station forecourt could be a quick win for the strategy.

Careful attention should be paid to the corner of Birmingham Road turning into St Johns Street to ensure there is sufficient space and set back from the traffic to accommodate comfortable pedestrian and cycle movements, as this will remain an important secondary route into the city.

To the east, the areas of, and around the Greenhill/Rotten



Vehicle and road infrastructure dominate Greenhill

Row/Birmingham Road/Church Street junction are an extensive expanse of tarmac with a clutter of bollards, lights, signs and railings. Whilst the geometry of the junction may be required, opportunities should be pursued to:

- reduce and rationalise the amount of highways clutter around this junction and;
- explore measures to include green infrastructure to mitigate the starkness and humanise the scale.

12. Station Square

The redevelopment of the Southern Gateway and the Birmingham Road site, together with the promotion of active travel, will establish the rail station as an important gateway to the city. The current environment of the station does not reflect this status and the proposal is to create a new Station Square. This new city space would be pedestrian-friendly, with taxis, drop off and parking tamed and controlled. A new cycle hub would be located in the square with easy access to the cycle network around the city.

The new square would be the southern terminus of the central wayfinding route through the city and should connect smoothly with the adjacent development site and then onward into the city.

13. St Johns Street

To improve the environment of St John Street from Birmingham Road to the Bore Street junction, it is proposed to restrict vehicular access to buses and key users only.

The benefits would be:

- to reduce the heavy flows of traffic,
- to improve access for residents and businesses,
- to enhance the setting of, and access to the listed St John Hospital
- to improve the public realm for the pedestrian and cyclist, in this instance, particularly visitors arriving by bus or train.



The narrow pavements of St Johns Street looking south to Birmingham Road

The detail of this concept and how it would be enforced would be subject to further study and consultation, but there are two options emerging. Option A limits the restrictions to St John Street between Birmingham Road and Frog Lane and Option B extends the restricted zone into The Friary, as far as the Premier Inn roundabout.

At public consultation, both options received a fair degree of support, but there was also a number of cautionary voices expressing concern about the perceived local and city-wide implications of reducing access and through traffic. It is our view that the concept has merit and is in line with the overall thrust of the objectives, but concerns raised would need examining and addressing.



OPTION A - Traffic restrictions within St Johns Street only
In Blue - Alternative vehicular movement
In Orange- restricted area



OPTION B - Traffic restrictions extend to The Friary
In Blue - Alternative vehicular movement
In Orange- restricted area

14. Tamworth Street/Lombard St/George Ln (parts)

Greenhill leading into Tamworth Street is an historic route into the city centre from the east and the lower section of Tamworth Street in particular retains much of these heritage qualities and proportions. Further east, the enclosure of the street is lost to the south, where the street is bounded by car parking and the wide junction arrangement at Gresley Row.

The pavement zone along this section of road is often restricted and this is particularly noticeable either side of the George Lane junction. Initial highways assessment would suggest that the road carriageway could be safely narrowed, whilst retaining the on-street short term parking, allowing the pavements to be widened.

Materials would be in line with the Southern Gateway palette and as the route forms an important vehicular access to the Cross Keys area and Lombard Car Park, the carriageway would be bitmac, to differentiate from the pedestrianised zone to the west of Lombard Street.



Tamworth Street looking up the hill towards Greenhill

Business & Learning Quarter

The character of this area is entirely different from the tight-knit intimate, historic core. Buildings are frequently set back from the kerb line and pavement and there is a greater density of tree cover, lawns and planting. This is a leafy, more spacious environment, entirely in keeping with the function as a business and learning district, with a campus-like feel appropriate to the presence of South Staffordshire College and Staffordshire University. The aim would be to enhance this contrasting vibe, whilst seeking to improve linkages to the city centre. This should be done by enhancing the space for pedestrian and cycle movement through the creation of leafy, tree-lined boulevards to the main arterial routes leading towards the city centre. Narrowing the space available within the road corridor for the vehicle would slow traffic and change the perception of use towards active travel modes.

The material palette could change to high quality concrete products in combination with natural materials and stronger colours could be introduced on the ground plane.

Business & Learning Quarter Materials

Footways	Yorkstone paving (flame) 500-700mm coursing x random length
Infill paving/trims	Tumbled, silver grey concrete setts 150 x 150mm and tumbled concrete setts, red multi, random coursed.
Kerbs	Conservation kerb, silver grey
Channels	Conservation channel
Carriageway	Bitmac
Shared Surface	Tumbled concrete setts, multi, random coursed.

15. The Friary

The Friary car park is 240 metres from the junction of Bore Street and St John Street, approximately a three minute walk. However, it is perceived as being distant from the city centre. We need to improve the connectivity between car park and the city centre, through improvements to the pedestrian connections along The Friary and towards Sandford Street.

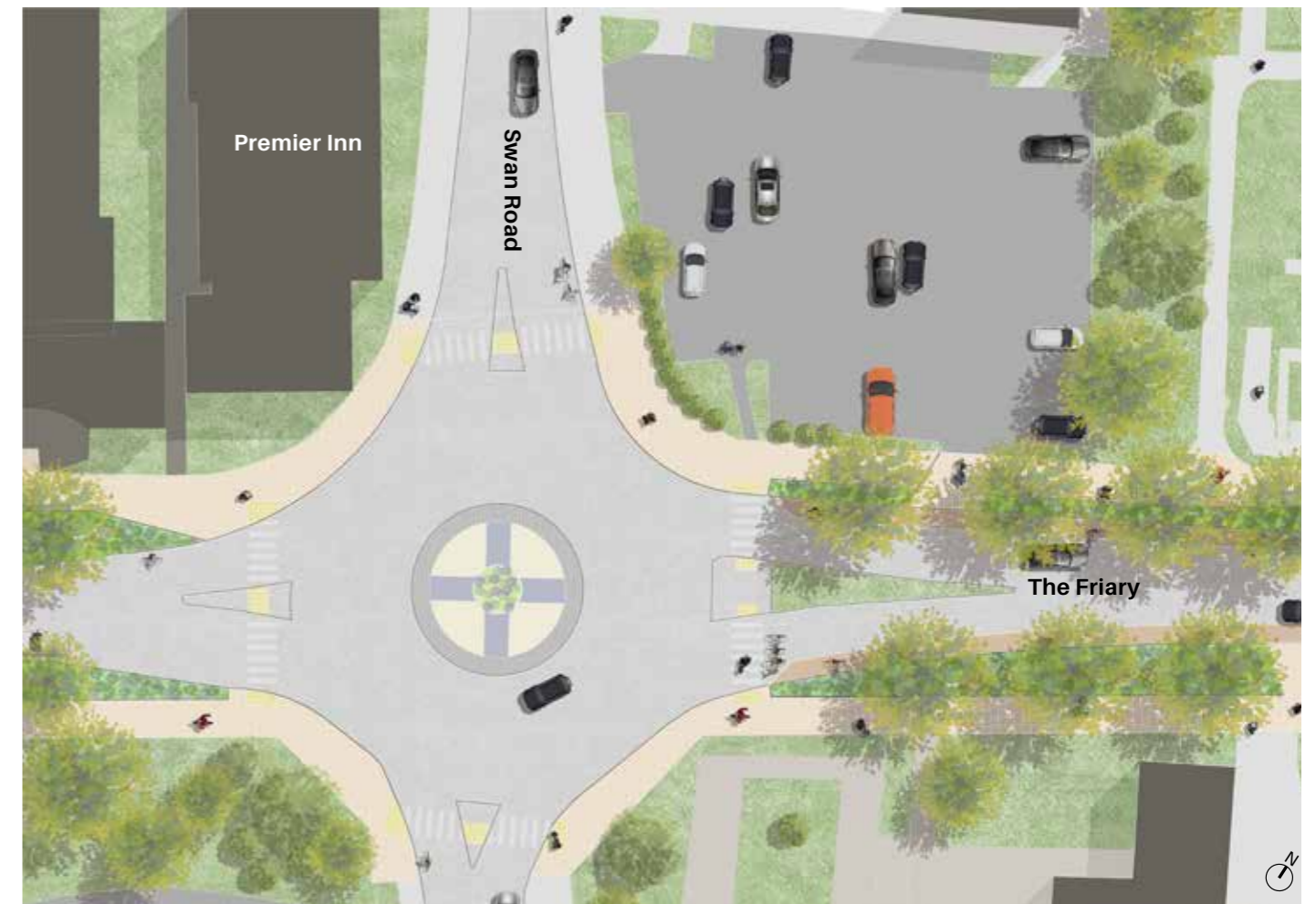
The Friary should become a boulevard with wider footpaths, provision of cycle lanes, and avenue trees and rain gardens to alleviate the effect of heavy rain events. All this can be achieved by reducing the road carriageway widths.

A continuity of paving materials, lighting and furniture and an improved pedestrian crossing over Swan Road would improve and perceptually shorten the journey.

An important secondary connection to heart of the restaurant offer on Bird Street exists from the north-eastern exit of the car park to Swan Road and along Sandford Street. The proposal would be to improve the signage, paving and road crossings along the route, but particularly to extend the pedestrian treatment of Sandford Street past the Horse and Jockey and up to the road junction at Charter House.



The Friary approaching Bore Street/St Johns St junction



The Friary junction and boulevard

Signage

Signage is a critical part of the Visitor Information System and this section should be read alongside - Hierarchy of Pedestrian Routes, on page 23. However, Signage also falls under other remits and responsibilities, for example health and safety and highways signage. This multi-agency involvement results in the uncoordinated appearance and clutter currently existing and previously described.

Signage design and location needs the same level of consideration as all other aspects of the public realm, so they become a positive element in the street and not detract from the overall image.

Principles to be adopted in the design and location are:

Clarity - all information displayed should be easily legible for the intended viewing position and viewer, but should only be present where the information is required and relevant.

A 'do minimum' approach - this starts with designing out the potential reason for a sign or road marking being required. For example, yellow lining is not necessarily required in Restricted Parking Zones; and railings and signs are not always required where pedestrian crossings are well-located on the pedestrian desire lines. Closely review necessary regulations and guidance to see how signage can be avoided, and if not avoided, then minimised.

A sequential approach - start with the minimum level of signage as above, and if more is seen to be essential, review closely and add cautiously.

Careful location - whilst ensuring legibility, position signs within the public realm to minimise visual and physical impact, enabling an uncluttered appearance and ease of movement. This could include attaching to existing buildings or structures (lighting columns) and certainly should involve planning multiple signs on the same column.

A coordinated approach - much investment within the public realm to achieve an attractive, uncluttered and pedestrian friendly environment, would be wasted or marred by the ill-considered spread of signage. Coordination is, therefore, required between departments and authorities responsible for the various types of signage, to work towards best practice and to take a holistic view of the cumulative impact on the city streets and spaces.

Timeless design - as with all the elements of street furniture, the design of the signage system should not follow any particular period style or attempt to conform to a general faux 'heritage' appearance. Rather the signage systems should be contemporary, contextual and applied

consistently. The signage system should look equally appropriate and at home within the Cathedral Quarter and the Southern Gateway Quarter. Any signs of genuine heritage value should be retained and if necessary, restored.

A Twin Approach

There is a risk in trying to display all the information required around the city on the same structures that the overall effect of the signage (no matter how well designed) becomes excessive and out of scale with the setting.

A twin approach is therefore proposed separating interpretative information from directional, shopping and visitor information.

Visitor Information System (VIS) - With respect to the Visitor Information System for the city, therefore, it is proposed to adopt a twin signage approach. Arrival points, shopping directories and pedestrian signs would all be included within a new signage system for Lichfield. These would be predominantly monoliths or information boards at key junctions and interchanges within and around the city, with finger posts either used in conjunction with, or as a directional adjunct to these.

The system should be designed as a set of components, flexible and easily adapted as requirements change.



Interpretation Points - Predominantly involved in the telling of the history of Lichfield, its streets, places, landscapes, buildings and people, these would take a more crafted approach to design, with the capacity to be monoliths, wall-mounted plaques or even installed in the ground. Elements of colour could be included to match the VIS Quarter colours. Not as visually apparent as the VIS, they would nevertheless form sculptural elements within the streetscape enriching the visual appearance.



Lighting

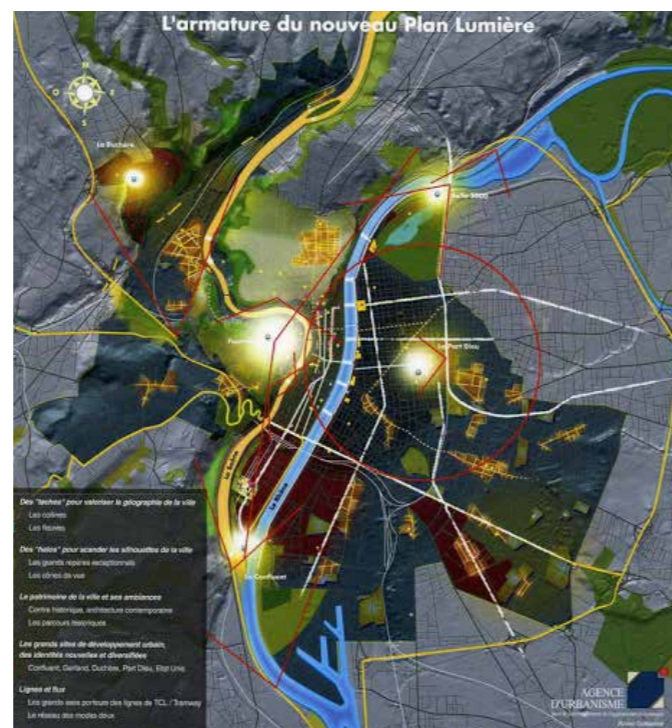


Building mounted light fittings on Tamworth Street

Given the framework of existing building mounted light fittings around the city centre, there is tremendous added value that can be relatively easily achieved through a coordinated lighting strategy. This would highlight key buildings and spaces contrasting with a background level of lighting in other areas and streets. The warmth of the light source itself can also be varied, revealing detail, creating visual interest and drama.

A key proposal is to make a holistic scheme of lighting for the city centre a priority public realm project. The transformative effect of a city-wide lighting strategy to the visitor and night-time economy is well tested and established. One of the early advocates was the city of Lyon in mid-France, whose Plan Lumiere and city beautification strategy fixed the position of Lyon as France's second city.

The initial proposal, therefore, is to brief and commission a Lighting Plan for Lichfield, that responds to and supports the approach to the streets, spaces and buildings within the Public Realm Strategy.



Lyon's Plan Lumiere

Principles for the Lighting Plan would include:

- Prepare a Lighting Plan for the city centre that considers a hierarchy of street lighting in conjunction with architectural feature lighting, including shop windows, floodlit buildings and feature trees.
- The lighting in Lichfield should be designed around human perception and not engineered for vehicles or to meet current lighting standards alone.
- Retain and restore historic lighting fixtures where possible, particularly in the historic centre and conservation areas. Incorporate modern, LED fittings.
- Where new lighting is introduced, the design should be in a simple, timeless, contemporary style that complements the street and other elements of street furniture. Pastiche lighting columns should be avoided.
- Use energy efficient fittings and luminaires and provide effective lighting controls to enable lighting levels to be varied to meet changing needs and moods.
- Lighting should be designed to limit light pollution. The use of full cut-off lighting may be appropriate in areas of architectural importance.
- In general, continue the programme of building mounted or ground fitted lights in preference to pole mounted lights in the city centre to minimise clutter.

- Lighting in areas where safety and security is an issue should conform to BS5489 3/2 Code of Practice for Crime and Safety.
- Regard should be given to Lichfield District Council's Environmental policies



Lichfield Guildhall



Different warmths of light at Halifax Piece Hall

Green Infrastructure

TREES

GENERAL CONSIDERATIONS

Trees and woodlands make a very positive contribution to sustainable urban living. They should be a key feature of almost all streetscapes and public spaces, regardless of the typology and character of the place, as their benefits are numerous and well documented.

Given the characteristics of the streetscape in Lichfield, it would be virtually impossible to plant 'too many' trees, as constraints placed on their satisfactory location will necessarily prevent this from happening. Projects, therefore, should seek to establish the maximum number of trees appropriate to the street or space's size, scale, character, functional requirements, constraints and design intent.

Large trees are generally preferable to small trees (their beneficial effects are generally amplified by size) but choice of tree type will obviously be influenced by the sites programmatic needs, constraints, soil conditions, micro climate, establishment and maintenance regimes.

In most instances to provide visual interest all year round, planting mixes should be dominated by native and/or naturalised deciduous species, as these best reflect the climatic climax vegetation of the Midlands. That said, opinion is starting to differ on this point with an increasing call for more exotic, non-native species to be planted in our urban areas, to offset the risk of wholesale denudation should infection strike our native species. The tree planting strategy, therefore, on any project should be developed with the tree officer in the first instance, with other relevant officers (planning, conservation, street cleansing, and maintenance, for example) becoming involved as necessary.

To maintain inter-visibility which enables 'natural surveillance' and sight-lines to/from vehicles, trees should generally be planted with a minimum clear stem of 3m, increasing where necessary to avoid taller vehicles.



AVENUE / STREET TREE SPACING

Where trees are to be planted directly into the ground in the footway, verge, or median, they must be spaced to allow easy pedestrian movement between them. Generally this would be achieved by an 'air gap' of at least 1.2m at maturity unless a 'barrier' was the design intent. Spacings for the largest of street trees, like London Plane for example, may increase to around 20m. More typical spacings however will be around 6m (to co-ordinate with parking bays) and up to 12m, as few trees will be able to develop a canopy bigger than 12m in relatively impoverished street soil environments.

Townscape Character

This should have an influence on the types, size, and number of trees planted, particularly if they fall within a conservation area or are close to listed buildings. Planting strategies should be developed in these instances with the conservation officer and possibly local interest groups.

SPECIES

Scale, size + appropriateness

The scale of a public space is not simply a function of its size, and trees should be planted at a size, type, and spacing appropriate to their townscape context.

Form + Habit

Often trees with an upright, columnar or fastigate habit will be most useful for planting in streets adjacent to carriageways to avoid conflicts with vehicles, although larger trees with broad and spreading (and possibly weeping) habits are often also suitable - as the London Plane and Norway Maple demonstrate.

Mix

Species should generally be mixed to increase biodiversity and reduce the vulnerability of a single species to pest and disease attack, unless the design intent requires a single species. Mixes of between 3 - 5 species should be sufficient, although on bigger projects/sites more should be considered.

Proximity to buildings

Trees should generally not be planted within 3m of buildings unless they are very small with a compact columnar or fastigate habit, and known not to cause problems associated with shrinkable soils.

Proximity to signals

Trees must be placed to avoid blocking the sightline to a signal head, both at the time of planting and through to maturity. Generally, trees should not be planted with the nearest part of the trunk at maturity within 450mm from the face of the road kerb. To avoid obscuring a signal head a sufficient clear stem must be specified and maintained.

Light + shade

Trees are important in providing shade from the sun and shelter from the wind and rain. Some species of trees can be useful in deflecting light into shaded parts of a site. Care should be taken however, in the placement of trees to avoid blocking light into adjacent buildings.

Nursery stock sizes

In the public realm, clear stemmed trees smaller than Extra Heavy Standard (EHS) 18-20cm girth will be vulnerable to vandalism, particularly snapping of the leader. To try and prevent this, semi-mature trees starting at 20-25cm girth are preferred and should be the minimum size planted where it is anticipated that vandalism might be an issue.

CONSTRAINTS

Trees - Utilities & Underground Structures

Trees should not be planted directly on top of a known utility or underground structure unless it is sufficiently deep as not to be affected by the anticipated additional loading that will be caused by the tree at maturity.

Water and sewage pipes (if they leak) are known to attract roots which can cause additional damage. It may be necessary to protect such utilities with a root barrier. Modern plastic pipes and ducts will not normally be damaged by trees roots. Root barriers, therefore are not usually needed around these utilities. Underground structures such as basements and chambers will not normally be damaged by tree roots unless they are already fractured. Root barriers should therefore be considered around old structures which would be damaged by root ingress.

MAINTENANCE

Leaf litter.

Nearly all deciduous trees loose their leaves in the Autumn, which necessitates the collection of leaf litter by the maintaining authority. Keeping roads and pavements free of leaf litter is important for safety, particularly when wet, as failure to do so can result in slip hazards.

Certain tree species, for example Ginkgo and Ash, have a tendency to drop most of their leaves in a single cold snap, which can assist in effectively clearing the litter in a single session.



Green Infrastructure

TREE PITS + SuDS

Trees are a major asset to Lichfield and a vital component of its urban landscape. On streets and other hard landscaped areas within the public realm, value can be added by incorporating SuDS measures within new tree pits and trees within new or retrofitted SuDS measures. By combining trees with other SuDS components, the volume of rainwater interception and attenuation can be significantly increased, alongside improvements to water quality, amenity and biodiversity.

SuDS tree pits can accommodate a single tree or can be a series of connected pits, designed as part of a whole-street SuDS solution. Structural soils or proprietary crate systems create a structurally sound carriageway to accommodate traffic loads while allowing sufficient space below ground for the roots of healthy mature trees and the management of surface water run-off. Designs that propose a SuDS system under the carriageway must be approved by the Council's Highways Department.

Benefits

Environment: street trees manage pollution in city streets by filtering dust, wind and noise, contributing to urban cooling, providing shelter and by improving air quality.

Interception: trees intercept rainfall on their leaves. Some of this water drips to the ground, some evaporates. Tree roots also absorb water, which is either used by the tree or released into the atmosphere through evapotranspiration. This reduces the volume of water entering the drainage system.

Attenuation: tree pits can store storm water runoff within structural soils or proprietary crate systems.

Infiltration: soil infiltration rates are increased due to improved soil structure linked to root growth and associated living and decaying organic matter.

Filtration: soils and geotextiles that make up the construction of tree pits remove silts and particulates that may be present in runoff water. Through 'phytoremediation', trees absorb trace amounts of harmful chemicals – including metals, hydrocarbons and solvents – transforming them into less harmful substances or using them as nutrients.

Amenity: trees add colour and interest to the townscape, soften the visual impact of the built environment, and contribute greatly to the city's character. Tree lined streets make cycling and walking more attractive and therefore more popular, enhancing the health and wellbeing of Lichfield residents and visitors. The presence of trees can slow traffic by changing the scale of streets. All these

strategies have been incorporated into the main access routes into the city centre.

Biodiversity: trees constitute the largest element of biomass in the city, providing significant biodiversity value. Trees provide food, habitat and shelter for birds, invertebrates and other species. A large species tree, such as an oak, can host hundreds of different animals, plants and fungi, with long-term benefit to the urban ecology.

Considerations

Existing trees: these must be retained where possible, however providing new attenuation or infiltration areas around existing trees is rarely feasible without seriously harming them. Proposals relating to existing trees should accord with BS5837:2012 and take account of tree preservation orders and conservation area designations.

Available space: tree pits require space below ground to successfully accommodate long-term root growth. Tree pits and trenches (connected pits) should provide adequate soil volume,

Discharge/infiltration rate: this dictates the size of the tree pit required for water storage.

Irrigation: lack of water and nutrients kills newly planted trees. The design and maintenance regime should include a means of efficient irrigation.

Aeration: soils and roots need air to live. The design of the tree pit should provide an air supply below ground to facilitate gaseous exchange around the root system.

Utilities: the location of below ground services and drainage should be identified to ensure root zones, utilities, and other below ground infrastructure are all coordinated. Protection for both long-term root growth and below ground infrastructure can be provided with root barriers.

Tree specification: considerations include tree species and diversity, provenance, mature size, clear stem height, root preparation and procurement.

Soil: the depth and type of soil should be appropriate for the tree species. Excessive topsoil depth increases the risk of anaerobic conditions (oxygen deficiency), which can affect the health of the tree. Topsoil should therefore only be used within the upper part of the soil profile, with suitable subsoil in the lower layer. Depths will be dependent on soil conditions, the tree specification and the type of load-bearing system employed.

Loading: the design and specification of the tree pit should take account of vertical loads imposed by traffic above and

from lateral loads imposed on the sides of the structure.

Pollution/contamination: pollution and contamination sources affecting surface and ground water can influence tree growth. Certain tree species are more susceptible than others, so species selection should be specific to each site and catchment area.

Inlets: surface water can be introduced through channels or rills as direct surface water runoff to a tree pit; via depressions or low points directing runoff from impermeable surfaces towards the tree pit; or via permeable surfaces used to collect and convey surface water to the tree pit.

Outlets: waterlogging can be a key reason for failure, so tree pits should be well drained. This is best achieved by infiltration if ground conditions are suitable. Where infiltration is not possible then an outfall to a surface water drainage network can be used.

MAINTENANCE

Trees require a higher level of management during the first five years after planting because roots need to establish good contact with the growing medium before they can efficiently extract water. Maintenance regimes for tree pits are likely to include irrigation, removal of leaf litter, staking and tying, formative pruning and crown lifting, changes to materials around the base of the tree (e.g. tree grilles, grates, permeable paving), and clearing debris from inlets and outlets.

THE ROOTING ZONE

GENERAL CONSIDERATIONS

The rooting zone is the area surrounding the tree pit into which the tree roots can spread as the tree develops. Ideally it should surround the tree equally on all sides to the anticipated edge of the canopy at maturity. Whilst underground constraints will make this difficult, the size should be maximised. Rooting zones can also be shared by adjacent trees and benefit from being linked together where possible.

Approximate Volumes

Trees were traditionally planted in pits without constructed/artificial root zones. Roots would find their way out of the pit into the adjacent soils and sub-soils. But then underground conditions previously were generally much less compromised than they are today - for example, without impermeable pavements, compacted and contaminated soils, and utilities. Planned and constructed root zones are therefore now almost essential for trees in hard paved areas. If no root zone can be provided due

to underground constraints the tree pit should be made as large as possible, and species selected to tolerate the impoverished conditions. So called 'Pioneer' species, such as Birch and Alder, may be particularly suited to these conditions and may survive and thrive even without a constructed root-zone.

As a minimum trees in the street require a well prepared and specified soil volume for satisfactory establishment and growth. Generally the root zone should extend as far as possible to the anticipated canopy edge of the mature tree at a depth of between 600 and 900mm below the pavement construction (i.e. up to a maximum of 1.2m total depth to account for pavement construction and drainage layer) to approximate natural soil profiles.

Although these requirements differ for various species and varieties of tree, as a rough guide the minimum recommended soil volumes are:

Small tree: 5-15 cubic metres

Medium tree: 20 - 40 cubic metres

Large tree: 50 cubic metres



Cellular root zone protection

Green Infrastructure

SuDS PLANTING

RAINGARDENS

Rain gardens are simply shrubs beds (although often planted with grasses) that have been designed to receive surface water from pedestrian and vehicle surfaces, or roof water run-off. Raingardens should be considered in all areas where shrubs, grasses, or lawns are proposed, in local surface water catchment areas and where underground conditions allow. In all of these instances, raingardens should also be considered for supplementary tree planting. Where the aspiration is to create a boulevard effect along a road corridor such as The Friary and Birmingham Road would be ideal location for raingardens in conjunction with avenue tree planting.

Species mix

Planting can range from wildflower mixes, grass mixes to low maintenance shrub mixes although mown grass verges / lawns may also be considered.

Planting medium

This needs to be carefully designed to provide sufficient nutrients to support plant growth and be free draining enough to allow water to infiltrate. Low nutrient growing mediums should therefore be considered to reduce the need for weeding.

Drainage

This will depend on the nature of the subsoils and the quantity of water anticipated. Piped overflow drains may there be required.

Mulch

Depending on the growing medium and species mix an 80mm depth maybe required during the establishment period to suppress weeds and retain moisture.



MAINTENANCE

Weeding

During the establishment period and until a closed canopy can suppress weed growth, weeding will need to be carried out at approximately monthly intervals through the growing season.

Watering

Watering may need to be carried out, especially in the establishment period and in periods of dry weather, depending on the species mix and planting medium for example.

Feeding

Spring and autumn feeds are likely to be necessary, depending on the species mix and soil medium.

Pruning

Pruning is likely to be necessary, depending on the species mix and soil medium.

De-silting / cleaning

SuDS beds, over time may become silted up which may impact on plant growth and/or their efficacy as SuDS components. In such cases it is likely the plants will need to be lifted, the drainage and growing mediums replaced, and then replanted. Any sacrificial component, designed to collect oils and other pollutants for example, will need to be replaced when they have reached saturation point.

Examples of raingardens



GREEN WALLS & ROOFS

Roofs and walls can provide the first point of interception as components of the SuDS management process. They are an effective and visually appealing way to integrate green infrastructure, even in tight, densely developed areas. A number of the alleyways, for example, Lloyd’s Walk, would be suitable locations to establish green walls.

Living roofs and walls can be designed as an integral part of new structures or retrofitted to existing structures.



As discussed earlier in the report, the historic, narrow nature of the streets in the city core is not conducive to extensive tree planting and city greening. Therefore every opportunity should be taken to include green roofs within new development.

Benefits

Attenuation: living roofs and walls can be used to intercept and attenuate rainwater. They allow a reduced discharge rate through evaporation and transpiration.

Filtration: living structures treat water through a variety of physical, biological and chemical processes within the soil and root uptake zones. They regulate surface water runoff temperature that could otherwise adversely affect the ecology of local water bodies.

Amenity: the aesthetics of a structure can be improved, softening the hard urban environment. Living structures can reduce air temperatures and can also act as a learning and urban farming resource, as plants on green roofs and walls can be used for growing food.

Biodiversity: living roofs and walls safeguard, enhance, restore, and create habitat with no additional land take. They provide important habitat stepping stones and contribute to the city’s natural capital. In particular, they provide refuge for invertebrates and food for pollinators.

Considerations

Substrate: green roofs can be designed with a variety of substrate materials and depths. Growing media can be soil, recycled materials, dead wood and aggregates. It is possible to choose more than one substrate on a single roof to create different microclimates and accommodate greater habitat diversity.

Vegetation: Plants can be seeded, self-seeded or pre-grown and planted. Species selection should be adapted to the microclimate and substrate specifications. Roof conditions can be hostile, with high winds, extreme temperatures, high rainfall and drought. Diverse dry meadow mixes, naturally self-sustaining in exposed environments, are a viable option. Natural windblown or bird-borne self-seeding is an economic alternative and will result in a naturally adapted selection of plants.

Structural resilience: living roofs add loading to a structure. Dead loads vary depending on the material used but are typically around 0.7-5.0 kN/m. Imposed loads can be up to 10 kN/m.

Irrigation: rainwater should be intercepted for irrigation, where possible. In some circumstances supplementary irrigation may be required to maintain vegetation.

Exceedance: the design of the green roof should be able to accommodate excessive rainfall by providing a suitable outfall.

Fire resistance: Fire risks can be managed using appropriate materials and design. Vegetation should be kept away from vulnerable areas such as PV panels and technology for example.

Access, safety and edge protection: Outlets and drains should be easily and safely accessible for inspection.

Green Infrastructure

MAINTENANCE

Periodic maintenance will include irrigation, inspection of outlets, and removal of invasive/unwanted plants. Green walls formed by climbing plants may need to be attached to supports as they grow. Proprietary products require maintenance of plants and irrigation systems, and may need occasional replanting.

SUSTAINABLE URBAN DRAINAGE SYSTEMS (SuDS)

Public realm projects within the city must contribute to Lichfield's ambitions to improve surface water management, and mitigate the risks of associated flooding, through delivering SuDS and water attenuation, in combination with trees and planting wherever possible.

The impact of climate change and the consequence of flooding is more significant around our towns and cities for a number of reasons:

- The air can be warmer, due to the heat that we generate during our day-to-day activities such as travelling around, manufacturing goods or heating our homes. This is known as the Urban Heat Island effect and results in more frequent higher intensity weather.
- Paving, or building, over areas which previously absorbed water means that rainfall runs off the surfaces much more quickly and enters the drainage system over a much shorter period of time. These man-made surfaces are also often dark in colour and absorb heat, again adding to the Urban Heat Island effect.

As a result, the capacity of our drainage system is being put under more pressure, and the consequences of flood events are becoming more severe,

SuDS are a crucial tool to mitigate flooding and managing the risk of pollution in a sustainable and cost-effective way. They can help manage the quality of runoff to protect the natural environment from pollution by treating or filtering the water before it enters the drainage network. This treatment can include the removal of sediment, silts and fine particulates or spillages of contaminants such as oils.

SuDS are generally made up of a sequence of components that manage the quantity and quality of water which runs off hard and man-made surfaces. Ideally the water should be managed from its source (the location where the rain lands on the surface) to the point at which it is discharged to the receiving watercourse or sewer.

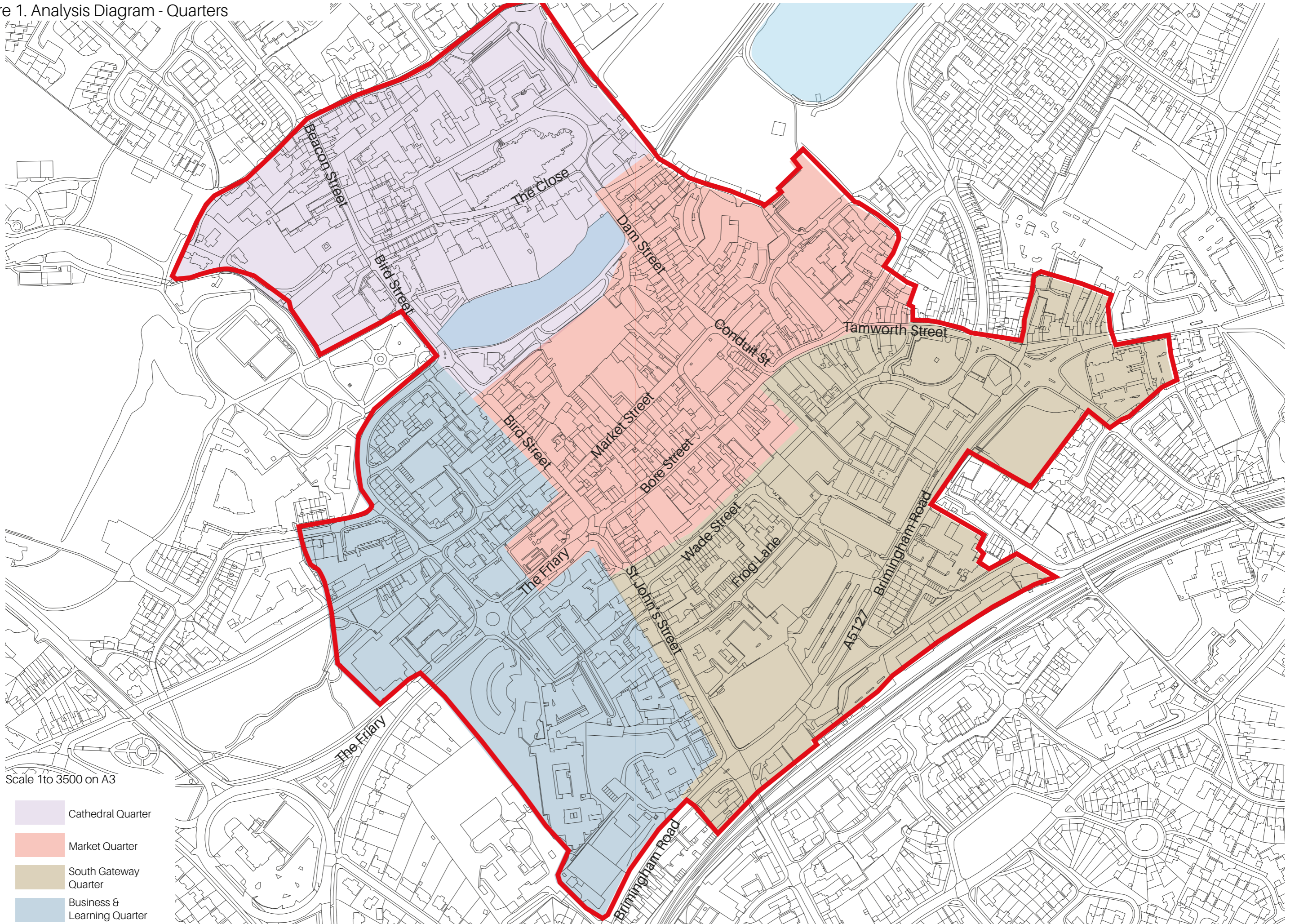
Managing the water from source to receptor will normally require a number of SuDS components to work in sequence to collect, store, convey and treat the water;

CIRIA calls this sequence the 'SuDS management train' and this terminology is widely used in the water management industry.

In the city centre of Lichfield the most appropriate SuDS measures would be raingardens and the use of permeable paving and materials.

These measures also contribute positively to the amenity and biodiversity of spaces. Water quantity, water quality, amenity and biodiversity are referred to as the four pillars of SuDS design, as set out in The SuDS Manual, Ciria C753, 2015.

Figure 1. Analysis Diagram - Quarters



Scale 1to 3500 on A3





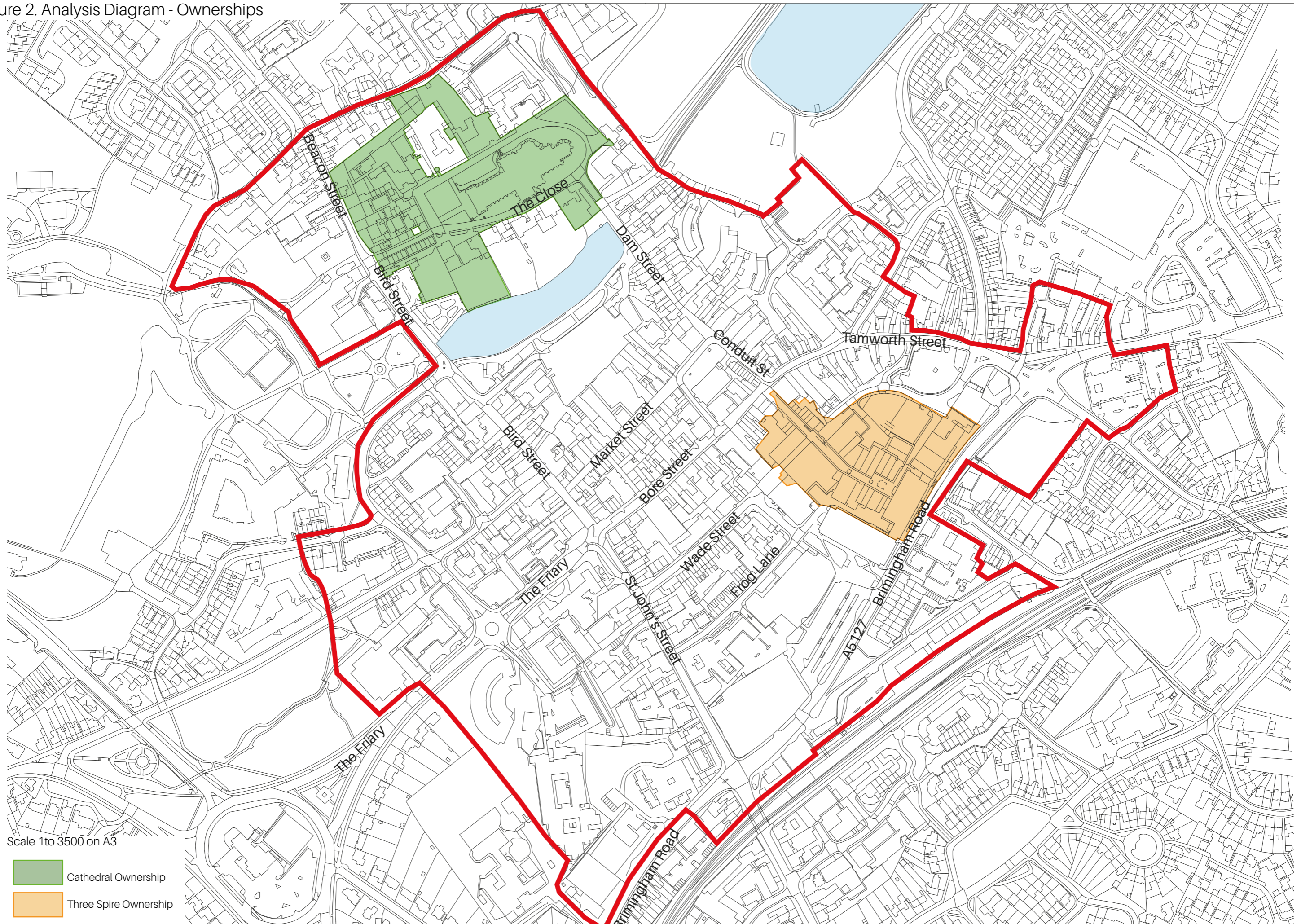
-  Cathedral Quarter
-  Market Quarter
-  South Gateway Quarter
-  Business & Learning Quarter

Figure 2. Analysis Diagram - Ownerships



Scale 1to 3500 on A3

- Cathedral Ownership
- Three Spire Ownership

Figure 3. Analysis Diagram - TRO

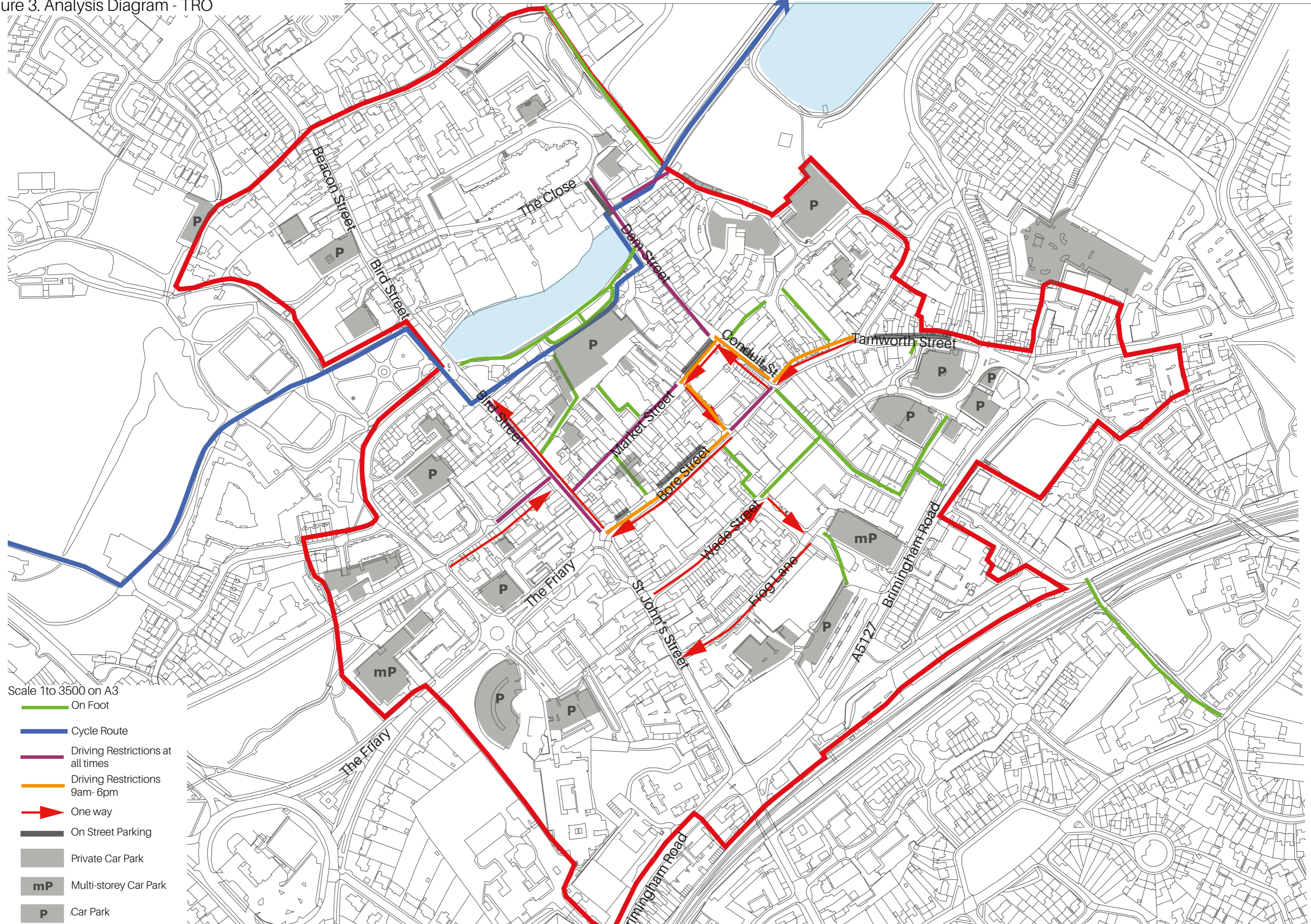
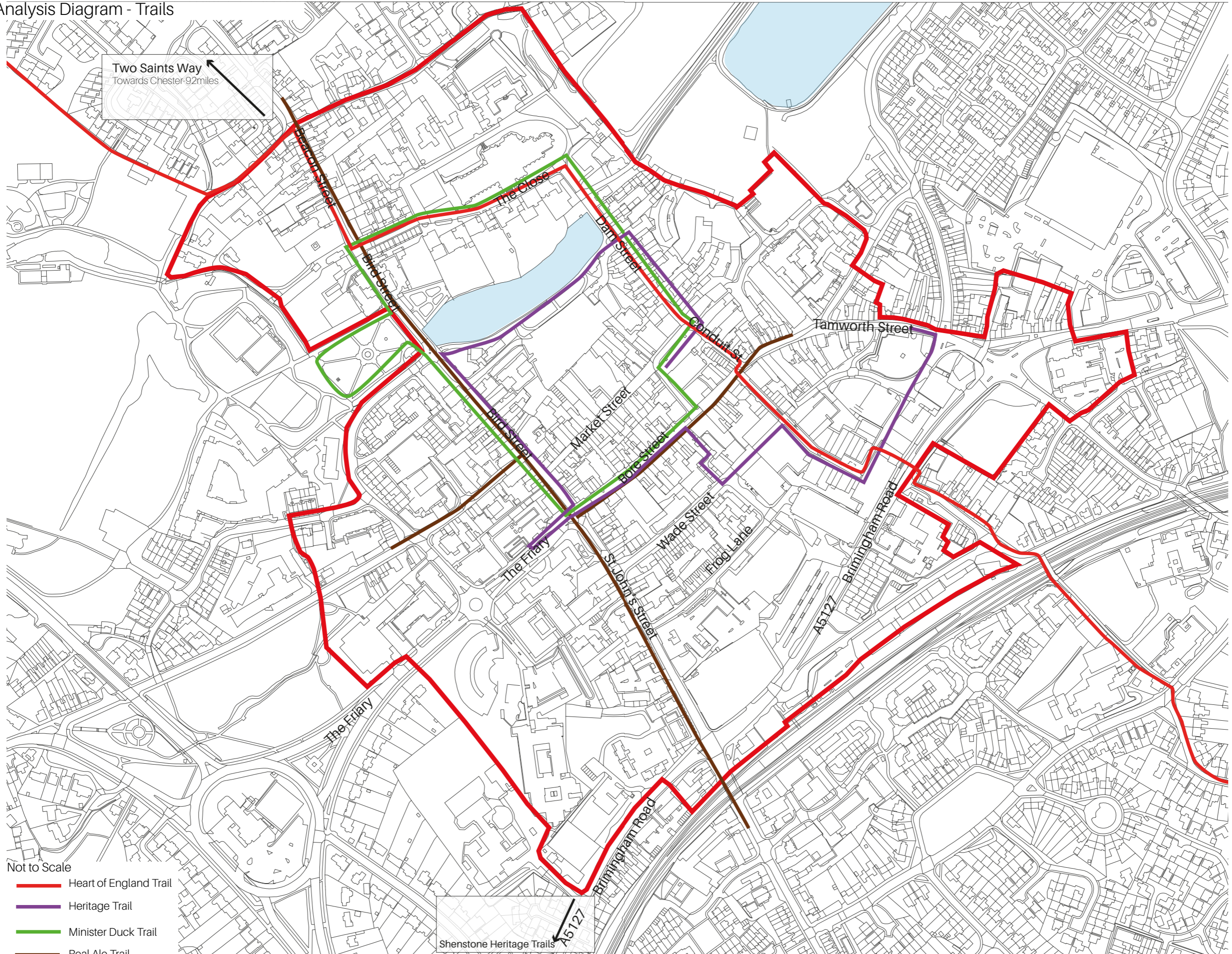


Figure 4. Analysis Diagram - Trails



Not to Scale

- Heart of England Trail
- Heritage Trail
- Minister Duck Trail
- Real Ale Trail

Figure 5. Public Realm Projects

Keys 12

Market Quarter

- 1. Market Square/
Breadmarket St/Bore St/
Conduit St/Tamworth St
- 2. Bore Street East
- 3. Market Street
- 4. Bird Street Gateway
- 5. Bird Street/ Sandford
Street/Car Park entrance
- 6. Dam Street
- 7. Lloyd's Walk
- 8. Minster Pool Walk/
Gardens
- 9. Reeve Lane

Southern Gateway Quarter

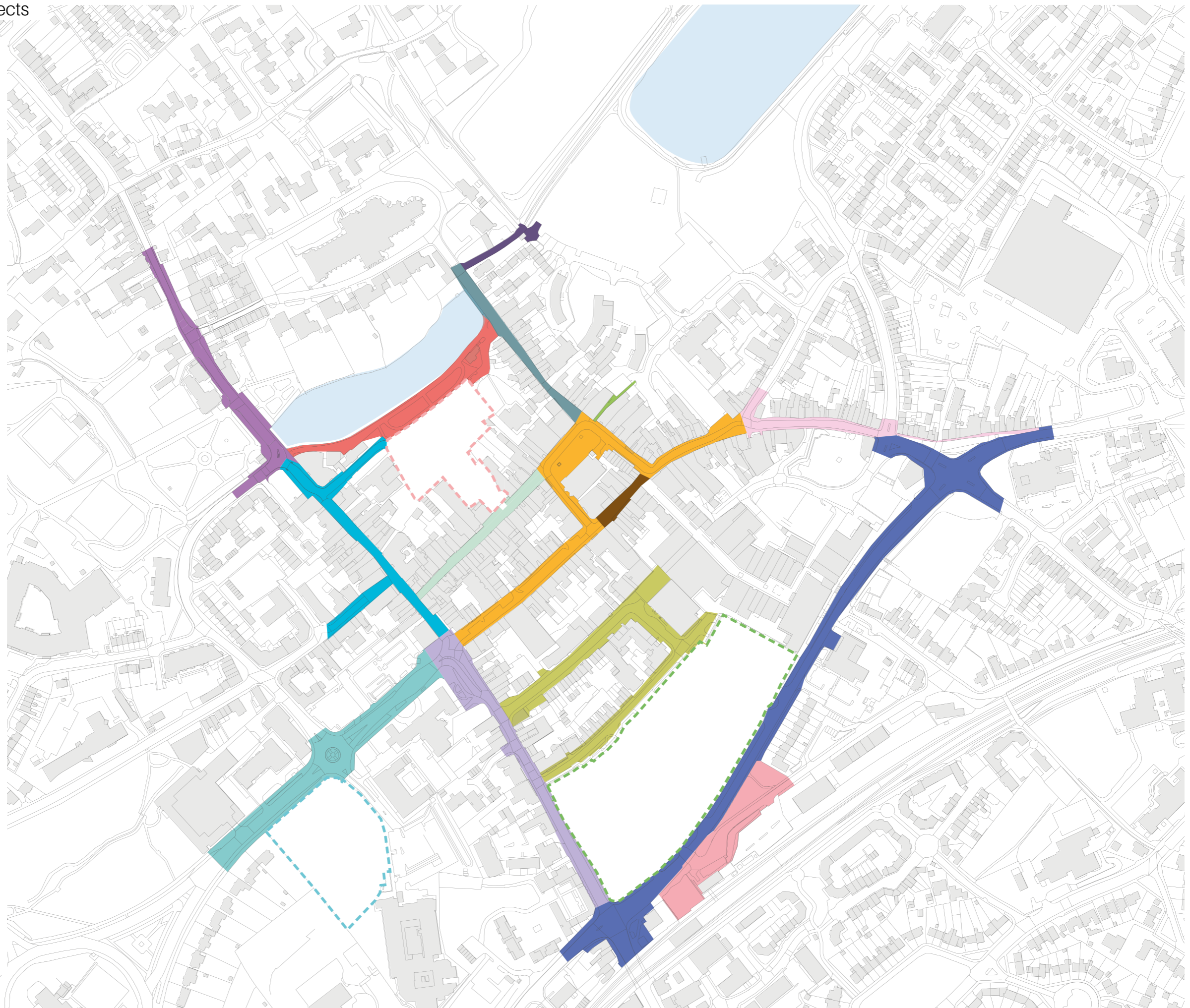
- 10. Wade Street/Castle
Dyke/Frog Lane
- 11. Birmingham Road/
Greenhill Jctn/St Johns
St Jctn
- 12. St Johns Street
- 13. Station Square
- 14. Tamworth Street/
Lombard St/George Ln
(parts)

Business & Learning Quarter

- 15. The Friary

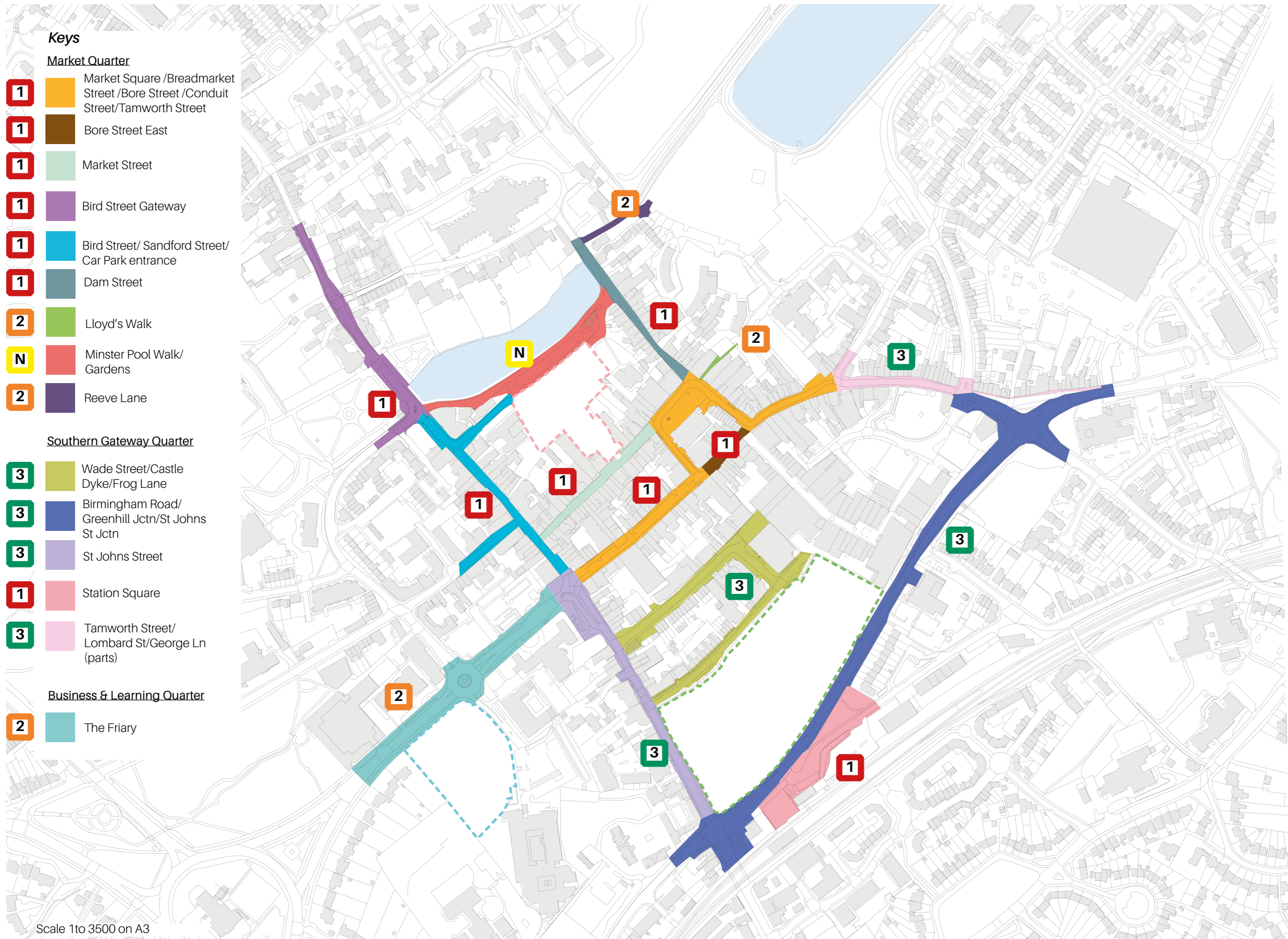
Development Sites

- Bird Street Car Park
Development Site
- Birmingham Road
Development Site/
District Council House
- University Development
Site



Scale 1 to 3500 on A3

Figure 6. Suggested Order of Project Priority (see Cost Summary pg 92)



LICHFIELD - PUBLIC REALM MATERIALS

Cathedral Quarter

Street	Drawing Code	Area	Description	Comments
Cathedral Precinct	CP1	Highway	Tarmac	
		Footpath	Yorkstone Flags	
		Kerbs	Yorkstone	Section of new kerb has been laid in granite to front of proposed sculpture location.
		Channel	Cobble and setts	
		Back of paving/infill	Cobble on edge detail	
		Bollards	Square timber with chain	
			Round timber vehicular deterrent	
			Heritage black steel vehicular bollards	
		Railings/handrails	Light, black steel	Light and elegant design.
		Lighting	Black steel faux gas light medium height fittings, with ladder bars	
Pool Walk	PW	Footpath	Tarmac	
		Seating areas	PCC flags	
		Tree pits	Asphalt with concrete flag surrounds	
		Railings	Black decorative vertical bar rail to pool edge.	Heritage detailing
		Seats	metal scroll arm benches, steel slats	Lichfield Green
		Lighting	Uplighters within tree pits	
		Strands of lights between trees.		
		Downlighters within trees		
Bird Street North	BST3	Highway	Tarmac	
		Footpath (East)	PCC Flags	
		Footpath (west)	Tarmac	
		Kerbs	Concrete	

Materials and Elements - Cathedral Quarter

CATHEDRAL PRECINCT- CP1



Highway - Tarmac



Footpath - Yorkstone Flags



Kerbs - Yorkstone



Channel - Cobble and setts



Back of paving/infill - Cobble on edge detail



Bollards - Heritage black steel vehicular bollards



Bollards - Square timber with chain



Bollards - Round timber vehicular deterrent



Railings/handrails - Light, black steel



Railings/handrails - Light, black steel



Lighting - Black steel faux gas light medium height fittings, with ladder bars

Materials and Elements - Cathedral Quarter

POOL WALK - PW



Footpath - Tarmac



Seating Area - PCC flags



Tree pit - Asphalt with concrete flag surrounds



Railings - Black decorative vertical bar rail to pool edge.



Seating - metal scroll arm benches, steel slats



Bollards - Heritage black steel vehicular bollards



Lighting - Uplighters within tree pits, Downlighters within trees Strands of lights between trees.



BIRD STREET NORTH- BST3



Highway - Tarmac



Footpath East - PCC flags



Footpath West - Tarmac



76 Kerb - Concrete



LICHFIELD - PUBLIC REALM MATERIALS

Market Quarter

Street	Drawing Code	Area	Description	Comments		
Dam Street	DSt1	Highway	Red Brick (herringbone)	wall to wall		
		Channel	Red Brick	bricks around channel and manholes in poor condition		
		Tree pits	circular steel grilles	lifting		
Reeve Lane	RveLn	Highway	Tarmac	wall to wall		
		Bollards	Steel (black) mix of sizes and type			
		Lighting	Medium height contemporary street lighting			
Dam Street to Bird Street Car Park	DSt2	Footpath	Red brick (herringbone)			
		Edging	PCC flags			
		Tree pits	Basalt setts circle			
		Bollards	Black steel heritage bollards	Heritage detailing		
		Seats	Metal scroll arm benches, timber slats (heritage)	Black		
Bird Street	BSt1	Highway	Blue eng brick (herringbone)			
		Footpath	Tarmac			
		Lighting	Wall-mounted highway			
		Kerbs	Concrete			
		Tree pits	circular steel grilles, black basalt sett trim, black steel tree guard	Pits have sunk		
Bird Street	BSt2	Highway	Blue eng brick (herringbone)			
		Channel	Blue eng brick (running)			
		Footpath	Red eng brick (stretcher)			
		Footpath	Yorkstone to west of junction			
		Kerbs	Concrete			
		Seating	Metal scroll arm benches, steel slats	Lichfield Green		
		Lighting	Contemporary highways column			
Bird Street	BSt4	Highway	Blue eng brick (herringbone)			
		Footpath	Red eng brick (basketweave)			
		Footpath	Intermittent stretches of YorkStone			
		Channel	Blue eng brick dished channel			
		Seating	Steel scroll arm steel slats	Lichfield Green		
		Bollards	Square section timber	poor condition		
		Lighting	Building mounted			
		infill paving at building edge	Cobble on edge detail			
		Bird Street/Swan Road Jcn		Highway	Grey concrete block	
		Market Street	MS1	Highway	Buff concrete paviours (herringbone)	
Channel	Buff concrete paviours (running)			To north of road		
Lighting	Building mounted					
Bollards	Lack steel heritage bollards					
Seating	decorative black steel ends, timber slats					
Tree pits	Steel scroll arm steel slats			Lichfield Green		
Bird Street Walk	BSW	Footpath	Red brick stretcher bond with blue brick stretcher bond edge			
		Lighting	Wall mounted			
		Market Square	MSq1	Highway	Multi red concrete paviour	
Kerbs	Red granite	75mm high				
Footpath	Yorkstone flags					
Channel	Black basalt sett					
Lighting	Building mounted					
Parking Bays	Delineated in black basalt setts					
Market Square	MSq2	Paving	Buff multi concrete paviours			
		Bands	Yorkstone flags with red granite trims	set off church buttresses		
		Trims	Black basalt sett			
		Infill at building edge	Cobble on edge detail			
		Channel	Multi rectangular granite setts			
		Tree pits	York stone quartile with round opening, circular steel tree guard	Set within bands		
Seating	Steel scroll arm steel slats	Lichfield green				

Materials and elements - Market Quarter

Materials and Elements - Market Quarter

DAM STREET- DST1



Highway - Red Brick (Herringbone)



Channel - Red Brick



Tree Pit - Circular steel grilles

REEVE LANE- RVELN



Tarmac - Highway



Bollards - Steel (black) mixed size/type



Lighting - Medium height contemporary street lighting

DAM STREET TO BIRD STREET CAR PARK- DST2



Footpath - Red Brick (Herringbone)



Edging - PCC flags



Tree Pit - Basalt setts circle



Bollards - Black steel heritage



Seating - Metal scroll arm benches, steel slats

BIRD STREET- BST3



Highway - Blue eng brick

BIRD STREET- BST2



Highway - Blue eng brick



Channel - Blue eng brick (running)



Footpath - Red eng brick (stretcher)



Footpath - Yorkstone to west of junction



Bollards - Square timber

BIRD STREET- BST4



Highway - Blue eng brick



Footpath - Red eng brick (basket weave)



Channel - Blue eng brick (running)

BIRD STREET- BST4 CONT...



Bollards - Square timber



Infill paving at building edge - Cobble on edge detail



Bird Street/Swan Road Jnctn - Grey concrete block

MARKET STREET- MST1



Highway - Buff concrete paviers (herringbone)



Channel - Buff concrete paviers (running)



Lighting - Building mounted



Bollards - Black steel heritage bollards



Seating - Steel scroll arm steel slats



Decorative black steel ends, timber slats



Tree Pit - Square, concrete pin kerbs

BIRD STREET WALK- BSW



Footway - Red block stretcher bond with blue block stretcher bond edge

MARKET SQUARE- MSQ1



Highway - Multi red concrete paviour



Kerbs - Red Granite



Footway - Buff concrete paviers

MARKET SQUARE- MSQ2



Lighting - Building mounted



Parking bays - Delineated in black basalt setts



Paving - Buff multi concrete paviers



Bands - Yorkstone flags with red granite trims



Trims - Black basalt sett



Infill paving at building edge - Cobble on edge detail

MARKET SQUARE- MSQ2 CONT



Channel - Multi rectangular granite setts



Tree Pit - York stone quartile w/ round opening, circular steel tree guard



Seating - Steel scroll arm steel slats



Bollards - Contemporary black steel, fluorescent band to top



Lighting - Building mounted



Lighting - Uplighters to sculptures

BORE STREET- BOST1



Highway - Concrete paviours (herringbone)



Footpath - PCC flags within arcade



Channel - Concrete paviours (stretcher) central

BORE STREET- BOST2



Highway - Tumbled concrete paviours



Footpath - Yorkstone flags



Channel - Black basalt sett

BORE STREET- BOST2 CONT...



Kerbs - Red granite 100mm high



Parking Bays - Black basalt setts



Crossovers - Yorkstone Setts

FRIARY/BORE STREET- FR/BOST JNCTN



Highway - Tarmac



Crossovers - Yorkstone Setts



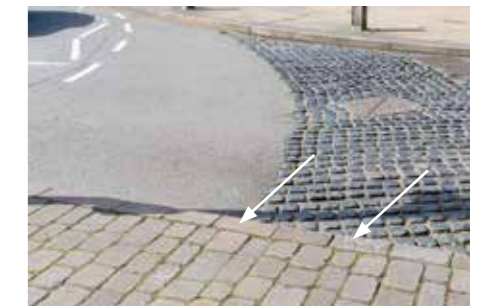
Footpath - Yorkstone



Footpaths - Red brick (stretcher) to arcade



Footpaths - PCC flags to south west



Kerbs - Yorkstone inner kerbs



Kerbs - St John's transitions to full height concrete



Bollards - Square section timber



Seating - Steel scroll arm steel slats

Materials and Elements - Market Quarter

FRIARY/BORE STREET- FR/BOST JNCTN CONT...



Tree Pit - Circular basalt sett trim

TAMWORTH STREET- TST1



Highway - Concrete tegula paving multi



Highway - Transitions yorkstone setts



Footpaths - Yorkstone Flags



Kerbs - Red granite transitions from 75-150mm high



Channel - Black basalt sett

THE TANNERIES- TTAN



Footpath - Tarmac



Kerbs - Flush concrete pin kerb and gravel

LICHFIELD - PUBLIC REALM MATERIALS

Southern Gateway

Street	Drawing Code	Area	Description	Comments		
Wade Street	WS1	Highway	Tarmac			
		Footpath	400 x 400 concrete slabs			
		Kerbs	Concrete			
		Crossovers	Blue eng brick (grooved)			
		Back of paving/infill	Cobble on edge detail	Poorly laid - not enough cobbles to mortar		
		Lighting	Highways lighting columns			
		Bollards	Square timber section	Poor condition		
		WS2	Paving	Concrete pavioirs with granite sett banding		
			Lighting	Highways lighting columns		
				Uplighters to Garrick Theatre		
Seating	Steel scroll arm with steel slats		Lichfield Green			
Castle Dyke	CDy1	Highway	Tarmac			
		Footpath	400 x 400 concrete slabs, red brick banding detail			
		Kerbs	Concrete			
		Bollards	Square timber section	Poor condition		
		Tree pits	Circular steel tree grilles, grey concrete block edging			
Frog Lane	FLa1	Highway	Tarmac			
		Footpath	400 x 400 concrete slabs (north)			
			Tarmac (south)			
		Kerbs	Concrete			
		Crossovers	Blue eng brick (grooved)			
		Back of paving/infill	Cobble on edge detail	Poorly laid		
		Bollards	Square timber section	Poor condition		
		Lighting	Highways lighting columns			
		St John's Street	StJSt1	Highway	Tarmac	
				Kerbs	Concrete	
Footpaths	400 x 400 buff PCC flags Red brick blocks set in buff concrete flags with blue and cream coloured brick trims. Blocks of brown concrete pavioirs set in					
Baker's Lane	BkrLa	Paving				
		Tree pits	Raised square brick planters with gravel fill			
		Lighting	Contemporary 8m column lighting with hanging baskets, gold trim and banner mountings			
		Seating	Black steel ended benches with timber slats			
		Railings	Contemporary system railings	heavy in appearance		
Upper St John's Street	UpStJSt1	Highway	Tarmac			
		Kerbs	Concrete			
		Footpaths	Tarmac			
		Lighting	10m highway lighting columns			
Birmingham Road	BRd	Higway	Tarmac			
		Kerbs	Concrete			
		Footpaths	Tarmac			
		Lighting	10m highway lighting columns			

Materials and Elements - Southern Gateway Quarter

Materials and Elements - Southern Gateway Quarter

WADE STREET- WST1



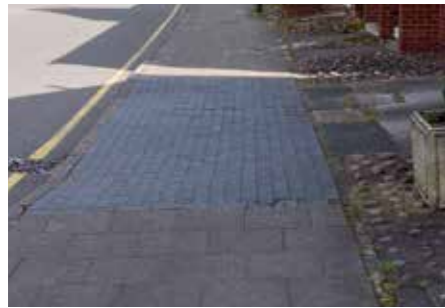
Highway - Tarmac



Footpaths - 400 x 400 concrete slabs



Kerbs - Concrete



Crossovers - Blue eng brick (grooved)



Infill paving at building edge - Cobble on edge detail



Lighting - Highways lighting columns



Bollards - Square timber section

WADE STREET- WST2



Paving - Concrete pavours with granite sett banding



Lighting - Highways lighting columns



Seating - Steel scroll arm steel slats

WADE STREET- WST2 CONT...



Cycle racks - Stainless steel Sheffield hoops



Channel - Aco drain denotes roadline

CASTLE DYKE- CDY1



Highway - Tarmac



Footpaths - 400 x 400 concrete slabs, red brick banding detail



Kerbs - Concrete



Bollards - Square timber section



Tree Pit - Circular steel tree grilles, grey concrete block edging

FROG LANE- FLA1



Highway - Tarmac



Footpaths - 400 x 400 concrete slabs (north)



Footpaths - Tarmac (south)

Materials and Elements - Southern Gateway Quarter

Materials and Elements - Southern Gateway Quarter

FROG LANE- FLA1 CONT...



Kerbs - Concrete



Crossovers - Blue eng brick (grooved)



Infill paving at building edge - Cobble on edge detail



Bollards - Square timber section



Bollards - Lichfield Green steel heritage bollards



Lighting - Highways lighting columns

ST JOHN'S STREET- STJST1



Highway - Tarmac



Kerbs - Concrete



Footpaths - 400 x 400 buff PCC flags

BAKER'S LANE- BKRLA



Paving - Red brick blocks set in buff concrete flags with blue and cream coloured brick trims. Blocks of brown concrete paviors set in various coloured brick trims



Tree Pit - Raised square brick planters with gravel fill



Lighting - Contemporary 6m column lighting with hanging baskets, gold trim and banner mountings

BAKER'S LANE- BKRLA CONT...



Seating - Black steel ended benches with timber slats (Google Image)



Railings - Contemporary system railings



Railings - Contemporary system railings

UPPER ST JOHN'S STREET- UPSTJST1



Highway - Tarmac



Kerbs - Concrete



Footpaths - Tarmac



Lighting - 10m highway lighting columns



Seating - Steel scroll arm steel slats

Materials and Elements - Southern Gateway Quarter

BIRMINGHAM ROAD- BRD



Highway - Tarmac



Kerbs - Concrete



Footpaths - Tarmac



Lighting - 10m highway lighting columns



Lighting - 10m highway lighting columns

Order of Cost

Lichfield District Council
Public Realm Strategy
Priority and Order of Cost Summary



Priority 1	Proj Ref	Comments	Project Rationale	Area m2	All in Rate £	Order of Cost £
Timescale		3 years				
Aims/Benefits		<p>Improve the night-time economy</p> <p>Unify, enhance and consolidate the core historic public streets and spaces around Market Square</p> <p>Address aging and failing public realm</p> <p>Embrace and present heritage</p> <p>Encourage footfall/dwell time</p> <p>Signpost move to active travel principles and create key public transport gateway</p>				
Projects	1	Market Square/Breadmarket Street/Bore Street/Conduit Street/Tamworth Street	Retain the quality existing paving within the historic city core area, but for consistency, implement the lighting, signage, and street furniture in line with the strategy.	6,900	£31.59	£218,000
	3	Market Street	A busy retail street, connecting Market Square with the main food and drink offer along Bird Street. Also the point of connection to an improved Bird Street Walk and onto Minster Pool, Market Street is a key component of the proposed central wayfinding route and is therefore, a high priority for improvement.	1,495	£294.31	£440,000
	4	Bird Street Gateway	This is a priority project as it addresses a number of movement issues around the Swan Road/Bird Street junction - extending the green corridor from Beacon Park diagonally to Minster Pool; from Minster Pool to The Close and into the Cathedral Precinct; and connecting the café and restaurant offer on Bird Street to both the park and the Cathedral.	3,785	£321.53	£1,217,000
	5	Bird Street/Sandford Street/Car Park entrance	Bird Street, with its many restaurants, pubs and bars is a significant part of the night time economy in Lichfield, and a key attraction for residents, visitors and potential investors. We obviously wish to build on this and want to ensure that the area is as welcoming and visually pleasing as possible. The current paving in the area is suffering significant degradation, detracting from the attractiveness of the area. Bird Street is identified, therefore, as a top priority, as its delivery will meet the aims and objectives for Priority 1 projects	3,712	£306.30	£1,141,000
	2	Bore Street (east)	The poor quality of the existing materials in this short stretch of the historic core, is highlighted by, and detracts from the high quality of the surrounding paving. For completeness, address this area as a high priority.	598	£324.41	£194,000

Lichfield District Council
Public Realm Strategy
Priority and Order of Cost Summary



Priority 1	Proj Ref		Comments	Project Rationale	Area m2	All in Rate £	Order of Cost £
Projects	6	Dam Street		A high priority project that would involve repairing the eastern rail of the historic ladder street pattern running north from Market Square and the main connection to the Cathedral (until such time as the Bird Street Car Park works are realised). The project also addresses the connections from Minster Pool to Reeve Lane and onto Stowe Pool and National Cycle Route, and in conjunction with the improvements to Bird Street would complete the revised Minster Pool Loop into the Cathedral precinct.	1,644	£341.85	£562,000
	13	Station Square		The importance of this key gateway space in front of the station as a welcome to the visitor and traveller is fundamental to what we are trying to achieve within the city. The message of a fresh focus on urban quality, active travel and public transport, must start here, so a quality public realm, ease of movement and clear wayfinding is critical. Although removed from the city core, the importance of the area merits a Priority 1 status.	2,906	£532.35	£2,171,000
			City wide Lighting Strategy		1	item	£80,000
			City wide Public Art Strategy		1	item	£25,000
			City Wide Signage and Wayfinding Strategy		1	item	£30,000
Priority 2	Proj Ref		Comments	Project Rationale	Area m2	All in Rate £	Order of Cost £
Timescale		5 years					
Aims/Benefits		Begin to define distinct Quarter character Improve key connectivity and links to city centre Promote active travel Increase Green Infrastructure					
Projects	15	The Friary		In a similar vein to Lloyd's Walk, the proposals to enhance The Friary for pedestrians and cyclists would be determined as a Priority 2 project, improving connections to the underused Friary Car Park, thereby encouraging its use and allowing traffic to be removed or restricted within the city centre areas. The creation of a tree boulevard character would also accord with the spirit of the Business and Learning Quarter.	6,616	£781.29	£5,129,000
	7	Lloyd's Walk		With the move to restrict car and vehicular movements around the city centre and encourage walking and cycling, the proposals seek to improve the active travel network and encouraging the use of the edge of centre car parks. Pedestrian access to these car parks is, therefore, critical and addressing the perceptions of poor personal security and improving the sense of welcome along Lloyd's Walk would further the aims of a Priority 2 project.	137	£525.55	£72,000
	9	Reeve Lane		Reeve Lane would extend the green corridor running west/east through the city from Beacon Park across Minster Pool Walk to Stowe Pool. Connecting the open space of Stowe Pool to the city and cathedral precinct would achieve the connectivity aims and objectives for Priority 2 projects.	1,832	£390.28	£255,000


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Priority 3	Proj Ref		Comments	Project Rationale	Area m2	All in Rate £	Order of Cost £
Timescale		10 years					
Aims/Benefits		Complete active travel network Integrate new development Consolidate city-wide public realm Establish Quarter identities					
Projects	10	Wade Street/Castle Dyke/ Frog Lane	*St Johns Street and Birmingham Road may be undertaken in conjunction with the delivery of the Southern Gateway development.	This predominantly residential area also provides access to commercial and business properties, a role that would increase with the development of the Southern Gateway scheme. Castle Dyke would also become a shared surface creating a much more generous frontage to the Garrick Theatre and incident of public realm along the central wayfinding route.	4,156	£302.21	£1,989,000
	14	Tamworth Street/Greenhill		An important vehicular route into the city from Birmingham Road providing access to Lombard Car Park. The historic street is narrow, with restricted pavements and extensive highway infrastructure around car parks and junctions. The proposal to narrow carriageways whilst retaining useful short-term, on-street parking would free up space for the pedestrian. A rationalisation of highway furniture and infrastructure would also maintain the scale of the street and remove clutter. The project aligns with the aims and benefits of a Priority 3 project to improve connectivity and wayfinding.	2,319	£310.05	£719,000
	12	St Johns Street*		Narrow pavements and heavy traffic epitomise this route into the city centre. The street also provides the setting for the listed Hospital of Saint John the Baptist and the Council Offices buildings and garden. With the development of the Southern Gateway site, links to the station and promotion of active travel routes, space for the pedestrian and cyclist must be found. The project is designated as Priority 3, improving connectivity around the city, but options are tabled to restrict traffic along this street to essential users only and it may be that the proposals for St Johns Street are progressed along with the adjacent Southern Gateway development area.	5,258	£336.44	£1,769,000
	11	Birmingham Road/Greenhill Junction/St Johns Street Junction*		Containing two junctions that form major gateways into the city centre and separating the station from the new Southern Gateway site and onto into the city, addressing the highway infrastructure and traffic-dominance of this corridor is major consideration. Space would be found for the pedestrian, cyclist and green infrastructure along a new boulevard. This project could conceivably be developed alongside the Southern Gateway to ensure a holistic, cohesive design.	15,675	£581.24	£8,659,000
Non-Scheduled			Comments	Project Rationale	Area m2	All in Rate £	Order of Cost £
Projects	8	Minster Pool Walk and Gardens		The public realm improvements within this area would be realised in conjunction with the completion of the Bird Street Car Park major development area.	4,688	£299.49	£1,181,000
		Floating Stage Provisional Sum					£540,000
Total (excluding VAT and other listed items)							£26,391,000

Success Criteria

Key

-  Little / No Impact
-  Low Impact
-  Medium Impact
-  High Impact

Projects

1. Market Square /Breadmarket Street /Bore Street /Conduit Street/ Tamworth Street
2. Bore Street (East)
3. Market Street
4. Bird Street Gateway
5. Bird Street/Sandford Street/ Car Park entrance
6. Dam Street
7. Lloyd's Walk
8. Minster Pool Walk and Gardens
9. Reeve Lane
10. Wade Street/Castle Dyke/Frog Lane
11. Birmingham Road/Greenhill Junction/St Johns Street Junction
12. St Johns Street
13. Station Square
14. Tamworth Street/Lombard St/ George Ln (parts)
15. The Friary

Measures of Success

	Hotel bed nights	City centre vacancy numbers	Footfall	Retail Spend/turnover/sales	Nighttime economy	Gross Value Added (GVA)	Retail diversity	Place attractiveness	Events and Festival days	Resident numbers within city centre	Customer/visitor/resident satisfaction	Ease of movement	Cycle and walking usage	Air Quality	Green Infrastructure (tree cover)
1. Market Square /Breadmarket Street /Bore Street /Conduit Street/ Tamworth Street	Medium Impact	Medium Impact	Medium Impact	Medium Impact	Low Impact	High Impact	Medium Impact	High Impact	High Impact	Low Impact	High Impact	Medium Impact	Low Impact	Little / No Impact	Little / No Impact
2. Bore Street (East)	Medium Impact	Medium Impact	Low Impact	Medium Impact	Medium Impact	Medium Impact	Low Impact	High Impact	High Impact	Low Impact	Medium Impact	Low Impact	Low Impact	Little / No Impact	Little / No Impact
3. Market Street	Medium Impact	High Impact	High Impact	High Impact		High Impact	Medium Impact	High Impact	Medium Impact	Low Impact	High Impact	Medium Impact	Low Impact	Little / No Impact	Little / No Impact
4. Bird Street Gateway	Low Impact	Little / No Impact	Little / No Impact	Little / No Impact	Low Impact	Low Impact	Little / No Impact	Low Impact	Low Impact	Low Impact	Low Impact	High Impact	Medium Impact	Medium Impact	Little / No Impact
5. Bird Street/Sandford Street/ Car Park entrance	High Impact	High Impact	High Impact	Little / No Impact	High Impact	High Impact	Low Impact	High Impact	High Impact	Medium Impact	High Impact	Medium Impact	Low Impact	Low Impact	Little / No Impact
6. Dam Street	Medium Impact	Medium Impact	High Impact	Medium Impact	Low Impact	Medium Impact	Medium Impact	Medium Impact	High Impact	Low Impact	High Impact	Low Impact	Low Impact	Little / No Impact	Little / No Impact
7. Lloyd's Walk	Little / No Impact	Little / No Impact	High Impact	Low Impact	Medium Impact	Medium Impact	Little / No Impact	Medium Impact	Little / No Impact	Little / No Impact	High Impact	High Impact	Medium Impact	Low Impact	Medium Impact
8. Minster Pool Walk and Gardens	High Impact	Low Impact	Low Impact	Low Impact	Medium Impact	Medium Impact	Little / No Impact	High Impact	High Impact	Medium Impact	High Impact	Medium Impact	Medium Impact	Little / No Impact	Medium Impact
9. Reeve Lane	Little / No Impact	Little / No Impact	Little / No Impact	Little / No Impact	Little / No Impact	Low Impact	Little / No Impact	Low Impact	Medium Impact	Little / No Impact	Low Impact	Medium Impact	Medium Impact	Little / No Impact	Low Impact
10. Wade Street/Castle Dyke/Frog Lane	Little / No Impact	Little / No Impact	Low Impact	Little / No Impact	Low Impact	Low Impact	Little / No Impact	Medium Impact	Medium Impact	Low Impact	Medium Impact	Low Impact	Low Impact	Low Impact	Medium Impact
11. Birmingham Road/Greenhill Junction/St Johns Street Junction	Little / No Impact	Little / No Impact	Low Impact	Little / No Impact	Little / No Impact	Low Impact	Little / No Impact	High Impact	Little / No Impact	Little / No Impact	Medium Impact	High Impact	High Impact	High Impact	High Impact
12. St Johns Street	Low Impact	Medium Impact	Low Impact	Low Impact	Low Impact	Medium Impact	Medium Impact	High Impact	Low Impact	Low Impact	Medium Impact	Medium Impact	Medium Impact	High Impact	Low Impact
13. Station Square	Medium Impact	Low Impact	Medium Impact	Low Impact	High Impact	High Impact	Little / No Impact	High Impact	Medium Impact	Medium Impact	High Impact	High Impact	High Impact	High Impact	Low Impact
14. Tamworth Street/Lombard St/ George Ln (parts)	Little / No Impact	Low Impact	Medium Impact	Low Impact	Low Impact	Medium Impact	Medium Impact	Medium Impact	Low Impact	Low Impact	Low Impact	Medium Impact	Medium Impact	Medium Impact	Low Impact
15. The Friary	Low Impact	Low Impact	Medium Impact	Low Impact	Medium Impact	Medium Impact	Little / No Impact	High Impact	Medium Impact	Low Impact	Medium Impact	High Impact	High Impact	Medium Impact	High Impact

ORDER OF COST SUMMARY - Basis of Pricing and List of Exclusions**A Basis of Pricing and Next Action**

- 1.1 The order of cost is based on Austin-Smith Lord Public Realm Strategy Report - dated September 2021 and indicated projects 1 to 16
- 1.2 Pricing is based on present value as 3Q 2021.
- 1.3 The order of costs are based on approximate areas for each project, as indicated in the Public Realm Report. The order of cost rates have been bench marked against the quality of materials within the Report and surface material palettes (Type A to D as indicated).
- 1.4 The all in rates for each project (as indicated in the cost summary) include allowances for new surface finishes to footpaths and roads, furniture including seating, bins, bollards and cycle racks, unless indicated otherwise and Landscaping. The allowances for surface finishes, furniture and landscaping for each project is included in the elemental summary.
- 1.5 The following allowance have been included - 10% Contingency, 6% OH & P, 15% Preliminaries, 15% Fees (any exclusions are indicated in the list below)
- 1.6 The 15% Fees shall include Landscape Architect, MEP, Structure and Civil Engineer, Highway Engineer, Conservation Architect.
- 1.7 City wide Lighting Strategy - £80k Fees to develop a brief for pricing
- 1.8 City wide Public Art Strategy - £25k Fees to develop a brief for pricing
- 1.9 City Wide Signage and Wayfinding Strategy - £30k Fees to develop a brief for pricing
- 1.10 Floating Stage in the Minster Pool - A provisional sum of £540,000 has been included subject to design input. This is assumed would form part of project 8 scope of work.
- 1.11 Each project has been allocated a recommendation of priority of implementation from category 1 to 3. The reason for each category is indicated in the Austin-Smith Lord Report in Figure 6 on page 71. Note category 1 is recommended/ seen as the first priority to be implemented
- 1.12 The next recommended action is a Public Realm programme of implementations is developed and co-ordinated with Lichfield City Master Plan and agreed with all the Lichfield City stakeholders. This includes the separate development sites such as: Bird Street Car Park site, Birmingham Road site/ District Council House and the University West Car Park site. The Citywide public realm projects design needs developing to give an overall consistent City approach of implementation of external lighting, information/wayfinding signage and public art work etc.
- 1.13 Basis of the Cost Estimate

The cost estimate for the Surface Finishes category shall include the following allowance:

- Removing existing surface finishes and replace with proposed finishes and kerbs as tabulated in the Surface Material Palettes for all the roads and areas as shown on the drawing.

- Provision of drainage connection for every 50 meters of the new kerbs.
- Extra over top soil removal and earthwork for the Station Forecourt
- Extra over new crossroad, cycle way and station court pavement at the Birmingham Road.
- Extra over for new round about and cycle way in additional to the resurfacing allowance at the Friary.

The cost estimate for the Street Furniture category shall include the following allowance:

- Removal of existing uncoordinated street furniture.
- In total of 50nr @ £3000 per Tree pit covers – 20 nrs to The Friary and 30 Nr to Birmingham Road.

ORDER OF COST SUMMARY - Basis of Pricing and List of Exclusions

- In total of 170nr @ £300 per bollard for all the streets.
- In total of 150nr @ £650 per cycle rack for all the streets.
- Provisional sum of £250k cycle hub at the Station Forecourt.
- In total of 60nr @ £500 per bin for all the streets
- In total of 80nr @ £3000 per seat, imported Falco timber Zitbank or similar for all the streets

- In total of 25nr @ £3000 per pop up power at the Market Square
- In total of 5nr @ £5000 per water point at the Market Square

The cost estimate for the Landscaping category shall include the following allowance:

- Maintenance of the existing green areas along the streets as shown on the google map with the budget range from £10 per sqm to £60 per sqm.
- Extra over for the large semi mature trees and rain garden with hard landscape rooting zone are allowed at the Friary (200m length rooting zone and 20 nrs big trees)
- Extra over for the large semi mature trees and rain garden with hard landscape rooting zone are allowed at the Birmingham Road (400m long rooting zone and 30 nrs big trees)
- Extra over for £2500 large semi mature tree 25cm to 30cm girth

B Exclusions**1 Financial, Legal & Statutory Related Exclusions**

- 1.1 VAT
- 1.2 Land acquisition costs.
- 1.3 Finance costs during construction.
- 1.4 Funding costs.
- 1.5 Legal fees
- 1.6 Specialist i.e. Archaeologist, Ecologist, Historical research, Artist etc
- 1.7 Breeam Fees
- 1.8 Party Wall Act 1996, covenant, rights of light, rights of way, etc.
- 1.9 Section agreements generally to include s.106, s.278, s215 and CIL etc
- 1.10 Planning & Building Control fees and charges.
- 1.11 Future inflation fixed price increases after 3Q 2021
- 1.12 Exchange rate/market fluctuations following the UK leaving the EU.
- 1.13 Allowances for LDC potential changes, design development and the like
- 1.14 Potential risks/ additional costs caused as a consequence of the Coronavirus (COVID-19) outbreak. It is therefore, recommended that the client makes sufficient budgetary allowances for such risks in their investment or development appraisal for the project.
- 1.15 Third party agreements and associated costs associated with land owned by Three Spires or the Cathedral, if applicable

2 Site Related Exclusions

- 2.1 Contamination and asbestos surveys and potential consequential removal or alternative measures generally
- 2.2 Abnormal ground conditions.
- 2.3 Himalayan Balsam, Japanese Knotweed or Maretail surveys and potential consequential removal/treatment
- 2.4 Capacity of the incoming mains services infrastructure
- 2.5 Attenuations ponds and/ or attenuation measures generally
- 2.6 Archaeological survey and potential works
- 2.7 Environmental survey and protection

ORDER OF COST SUMMARY - Basis of Pricing and List of Exclusions

2.8 Ground stabilisation and remediation

3 Construction Related Exclusions

- 3.1 Works to Cathedral Quarter - The Report considers the existing materials within in this area is of high quality and appropriate.
- 3.2 Works to other City Developments sites including: Bird Street Car Park site, Birmingham Road site/ District Council and University West Car Park site
- 3.3 Citywide lighting up grade but excluded feature lighting for the key building (£80k fees included)
- 3.4 Citywide public artwork works (new and existing restoration of existing feature, status, architecture)(£25k fees included)
- 3.5 Birmingham Road high way works and junction potential alteration works adjacent to the railway station/railway bridge etc (except the Friary and Birmingham roads)
- 3.6 Green roofs and walls - It is assumed will form part of the other City Development sites.
- 3.7 Citywide car park works
- 3.8 Citywide electric charging points (allowance only at the Market Square)
- 3.9 Diversion / termination of any existing services crossing / adjacent the site
- 3.10 Incoming utilities and associated BWIC
- 3.11 Upgrading the existing drainage (included allowance for drainage connection)
- 3.12 increase of existing drainage capacity excluded
- 3.13 Citywide information and wayfinding signage works (£30k fees included)
- 3.14 Works to existing planters, parapet walls and railing next to or attached the existing buildings
- 3.15 Restoration of the existing historical figure i.e. Heart of England Way pavement markers

Footpaths and Roads - Surface Material Palettes**Market Quarter****Type A****Footpaths :**

Yorkstone paving (riven); 500-700mm coursing random length

Kerbs:

Yorkstone; 180mm wide x 125mm high x random length

Channels:

River cobbles set in mortar with black granite cube edgings

Carriageway:**Shared surface:**

Yorkstone sett , random coursed

Type B**Reeve Lane - Only****Footpaths :**

Yorkstone paving (riven); 600mm coursing random length (laid to north only)

Kerbs:

Yorkstone - flush; 250mm wide x 125mm high x random lengths

Channels:

Dark grey/ black granite 250mm wide x random lengths

Carriageway:

Fibredec or similar

Shared surface:

Yorkstone sett , random coursed

Southern Gateway Quarter**Type C****Footpaths :**

Yorkstone paving (diamond sawn); 500mm coursing x random length

Kerbs:

Yorkstone; 180mm wide x 125mm high x random lengths

Channels:

Concrete

Carriageway:

Bitmac/ concrete block

Shared surface:

Floating Stage Provisional Sum

Tumbled concrete setts, multi, random coursed

Lichfield District Council
Public Realm Strategy



Footpaths and Roads - Material Palettes

Business & Learning Quarter

Type D

Footways :

Yorkstone paving (frame); 500-700mm coursing x random length

Infill paving/ trims :

Trumbled, silver grey concrete setts 150 x 150mm and tumbled concrete setts, red multi random coursed

Kerbs:

Conservation kerb, silver grey

Channels:

Conservation channel

Carriageway:

Bitmac

Shared surface:

Tumbled concrete setts, multi, random coursed

Lichfield District Council
Public Realm Strategy



ORDER OF COST ELEMENTAL SUMMARY

Projects	Public Realm Areas/ Scope of Works	Total £	Elements of Work Cost				Sundry Add On Cost Items				
			A1. Surface Finishes	A2. Street Furniture	A3. Landscaping	Sub Total	Contingency	OH & P	Prelim	Fees	Sub Total
							10%	6%	15%	15%	
Section A	<u>Surface Finish, Furniture and Landscaping</u>										
	<i>Market Quarter (surface material palette "A")</i>										
Project 1	Market Square/ Breadmarket Street/ Bore Street/ Conduit Street/ Tamworth Street	£217,890.78	£2,700.00	£124,800.00	£13,800.80	£141,300.80	£14,130.08	£9,325.85	£24,713.51	£28,420.54	£76,589.98
Project 2	Bore Street East	£194,446.76	£105,800.00	£19,700.00	£597.50	£126,097.50	£12,609.75	£8,322.44	£22,054.45	£25,362.62	£68,349.26
Project 3	Market St	£439,910.05	£263,784.00	£20,000.00	£1,494.90	£285,278.90	£28,527.89	£18,828.41	£49,895.28	£57,379.57	£154,631.15
Project 4	Bird Street Gateway	£1,216,974.02	£699,024.00	£33,395.00	£56,781.00	£789,200.00	£78,920.00	£52,087.20	£138,031.08	£158,735.74	£427,774.02
Project 5	Bird Street/ Sandford Street/ Car Park entrance	£1,141,260.26	£707,996.00	£28,392.00	£3,712.10	£740,100.10	£74,010.01	£48,846.61	£129,443.51	£148,860.03	£401,160.16
Project 6	Dam Street	£561,578.30	£313,408.00	£26,115.00	£24,657.00	£364,180.00	£36,418.00	£24,035.88	£63,695.08	£73,249.34	£197,398.30
Project 7	Lloyd's Walk	£71,686.12	£26,152.00	£19,650.00	£686.00	£46,488.00	£4,648.80	£3,068.21	£8,130.75	£9,350.36	£25,198.12
Project 8	Minster Pool Walk and Gardens	£1,181,096.43	£662,016.00	£20,937.00	£82,980.60	£765,933.60	£76,593.36	£50,551.62	£133,961.79	£154,056.06	£415,162.83
	Floating Stage (provisional sum)	£539,712.25	£350,000.00			£350,000.00	£35,000.00	£23,100.00	£61,215.00	£70,397.25	£189,712.25
	<i>Reeve Lane (surface material palette "B")</i>										
Project 9	Reeve Lane	£254,886.51	£130,528.80	£26,080.00	£8,683.50	£165,292.30	£16,529.23	£10,909.29	£28,909.62	£33,246.07	£89,594.21
	<i>Southern Gateway Quarter (surface material palette "C")</i>										
Project 10	Wade Street/Castle Dyke/Frog St/ Southern Gateway	£1,988,605.86	£1,258,264.00	£24,728.00	£6,606.40	£1,289,598.40	£128,959.84	£85,113.49	£225,550.76	£259,383.37	£699,007.46
Project 11	Birmingham Road/Greenhill Junction/St Johns Street Junction	£8,658,693.07	£3,698,640.00	£132,778.00	£1,783,690.00	£5,615,108.00	£561,510.80	£370,597.13	£982,082.39	£1,129,394.75	£3,043,585.07
Project 12	St Johns Street	£1,769,334.04	£970,788.00	£18,880.00	£157,734.00	£1,147,402.00	£114,740.20	£75,728.53	£200,680.61	£230,782.70	£621,932.04
Project 13	Station Square	£2,171,317.30	£1,100,049.00	£299,845.00	£8,191.62	£1,408,085.62	£140,808.56	£92,933.65	£246,274.17	£283,215.30	£763,231.68
Project 14	Tamworth St/ Greenhill	£719,376.60	£442,472.00	£21,720.00	£2,319.20	£466,511.20	£46,651.12	£30,789.74	£81,592.81	£93,831.73	£252,865.40
	<i>Business & Learning Quarter (surface material palette "D")</i>										
Project 15	The Friary	£5,129,372.80	£2,252,308.00	£97,155.00	£976,903.00	£3,326,366.00	£332,636.60	£219,540.16	£581,781.41	£669,048.63	£1,803,006.80
Section B	Citywide Lighting Strategy - Cost to Develop a Strategy only	£80,000.00								£80,000.00	£80,000.00
Section C	Citywide Signage/ Wayfinding Strategy - Cost to Develop Strategy only	£30,000.00								£30,000.00	£30,000.00
Section D	Citywide Public Art Strategy - Cost to Develop a Strategy only	£25,000.00								£25,000.00	£25,000.00
		£26,391,141.15	£12,983,929.80	£914,175.00	£3,128,837.62	£17,026,942.42	£1,702,694.24	£1,123,778.21	£2,978,012.22	£3,559,714.06	£9,364,198.73

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