Urban Design & Landscape Architecture

MILTON KEYNES COUNCIL

Wolverton Public Realm

Design Manual

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This document has been prepared by Milton Keynes Council's Urban Design, Landscape Architecture, Highways, Traffic and Transport, Conservation & Archaeology teams and in collaboration with Wolverton Steering Group and Wolverton & Greenleys Town Council.

For further information on Urban Design and Landscape Architecture issues in relation to this document please contact:

Grant Gibson, Design and Special Projects Manager

Urban Design and Landscape Architecture
Planning, Economy and Development
Milton Keynes Council
PO Box 113, Civic Offices
1 Saxon Gate East
Milton Keynes, MK9 3EJ

T +44 (0) 1908 254727
E Grant.Gibson@Milton-keynes.gov.uk

For all Highways, Traffic and Transport enquiries in relation to this document please contact the Environmental Services Helpline

T 01908 252570 or 01908 252398
E envservices@milton-keynes.gov.uk

For all Conservation & Archaeology and wider Planning enquiries in relation to this document please contact the Planning helpline

T 01908 252358
E planning.enquiries@milton-keynes.gov.uk

Contents

1 Introduction

This manual acts as technical guidance. It has been produced in order to provide a guide for the design, selection, installation and maintenance of the public realm, street furniture and materials within Wolverton.

1.0 Introduction

In March 2011, an analysis of Wolverton's public realm was undertaken. The findings showed that the town suffered from a lack of definition due to an unco-ordinated approach to the design, selection, installation and maintenance of public areas, street furniture and materials throughout the town.

This had a knock-on effect of the town's identity becoming diluted, having unattractive public spaces and generally being difficult to understand and navigate.

The town's remaining Victorian public realm was also found to be in a poor state of repair.

A co-ordinated approach was need across the town in order to reinforce its identity and retain the conservation area heritage.

As a result of these findings, this manual was produced to provide guidance on the design of the public realm and ensure it is co-ordinated, attractive, easily understood and easy to move around.

The guidelines provide clear and robust design recommendations for:

- the way we arrive or move around the town by foot, cycle, public transport or car;
- the relationships between movement patterns and the design of streets and spaces in the centre; and
- creating a co-ordinated approach to the design and maintenance of the highway and environment.

The design of the public realm and the inter-relationship with transport and movement systems is one of the most significant elements in shaping the future character and image of Wolverton. Careful and informed design of the public realm and the way we move around is fundamental to the quality of future development, and will contribute greatly to the attractiveness and vitality of the town.

1.1 Area of Study

The area covered by this study is essentially outlined by the conservation area boundary. However, the principles detailed here should be consulted when works are planned throughout the town.

1.2 Rationale

Design guidance and principles for the public realm are essential for Wolverton to thrive as a place that is attractive to visit, live, work and invest in. The guide should encourage those responsible for the appearance and function of public space to adopt a co-ordinated approach to the public realm which respects the local context, delivers quality and reinforces the identity of the town. Design consistency will make it possible to avoid a piecemeal appearance to Wolverton's public spaces, which can damage the character of the town.

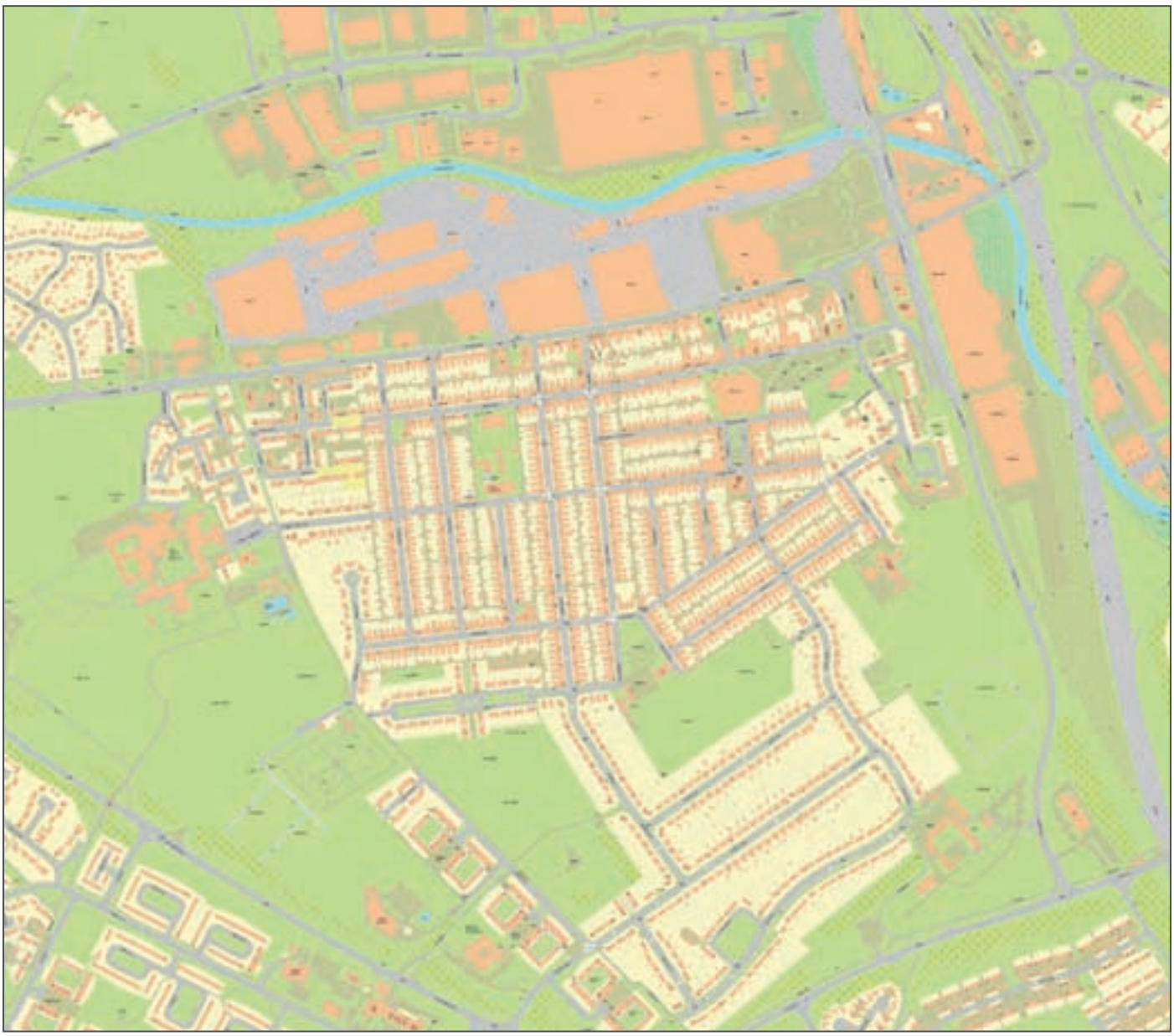
1.3 Scope

It is not envisaged that all prescribed suggestions within this manual will be implemented immediately; this document is to be referred to for planned future developments, public realm improvements and maintenance works.

It is positively encouraged that when work is carried out in the public realm it should be in accordance with the specification detailed in this document in order to form a more coherent and attractive streetscape.

Residential Street, Wolverton

Church Street, Wolverton



Wolverton

1.4 **Objectives**

The following objectives for the Wolverton Public Realm Design Manual have been identified:

- to provide a common coherent strategy and approach to the public realm and movement within Wolverton;
- to provide the basis for all decisions relating to the public realm;
- to put in place design principles to ensure that the public realm is designed to the highest quality and is appropriate for the future role and identity of Wolverton;
- to ensure that Wolverton is seen as a whole, and its public realm and movement patterns are co-ordinated; and
- to improve the pedestrian environment – ensuring that the way people move around the public realm is an attractive, safe and memorable experience whether they travel on foot, by cycle, public transport or by other modes.

1.5 **Vision**

As Wolverton evolves, the form and function of the public realm will change over time. The manual is intended to establish a good foundation on which to build and guide the design of this evolving public realm. This will be achieved by establishing a recognised 'family' of materials and components across the town.

The public realm is a key component enabling the town to fulfil its role as an attractive place to live, visit, do business and invest for the communities of Wolverton as well as the surrounding estates and villages it serves. Its streets, squares and other public spaces must be of high quality, in their design, management and maintenance, to set the context for the town as a neighbourhood centre. The public realm should reflect the best of modern practice, embracing new technologies whilst maintaining the best of the local character, distinctive patterns of development, sense of history, culture and traditions.

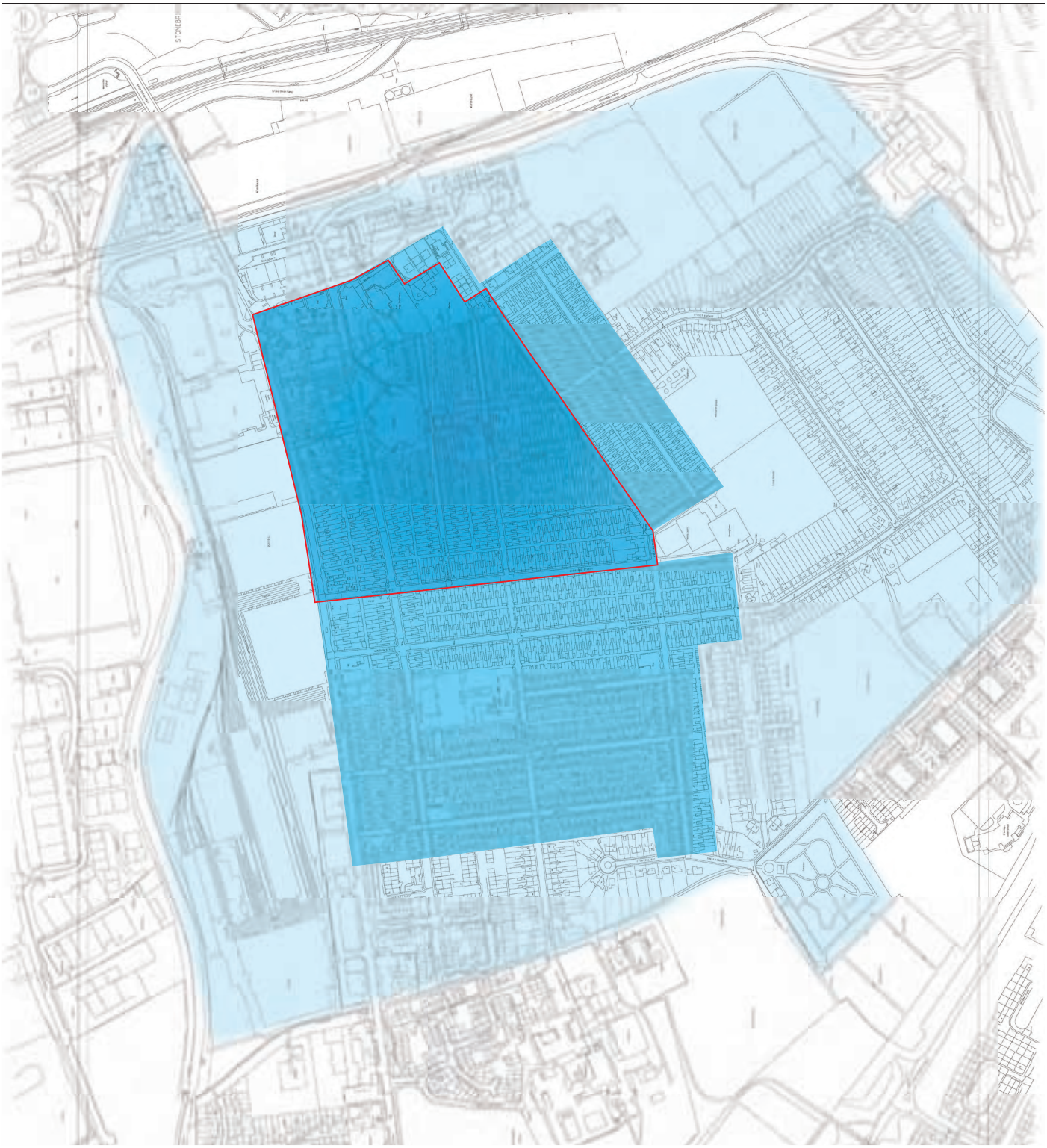
An attractive and safe public realm will contribute to the quality of life and economic prosperity of the town, creating a place where businesses choose to invest and people want to live. Wolverton must be accessible to all, easy to understand, navigate and be inspiring and enjoyable to be in.

The public realm will be robust and able to adapt to changing needs. It will build upon and enhance the principles outlined in the conservation area review, that have successfully guided the physical, economic and social development of Wolverton over its history.

The identity and character of the public realm in Wolverton will complement future development and provide a setting for new, exciting development opportunities.

Across the town, a co-ordinated 'family' of street furniture and materials will enhance the identity for the Wolverton streetscape and have a close relationship with the movement principles set out in the manual. This 'family' of components will enhance local distinctiveness and will inform design decisions.

This 'family' and the overall approach to design will also influence the design of publicly accessible, but privately owned, space within future development projects and the 'special areas' of high quality civic and central places within the town centre.


Area of Study
Fine Grain Victorian Core
(1850 - 1900)
Coarse Grain Later Development
(1900 - 1920)
Overall area affected

2 Urban Design Principles for the Public Realm

2.0 Understanding the public realm

Within the context of the Wolverton Public Realm Design Manual the public realm is defined as all the spaces between buildings that can be freely accessed by the public. From an urban design perspective, it encompasses all outdoor areas including streets, backways, parks, squares, pedestrian areas, cycle routes and other areas that enable seamless movement through a network of spaces. It therefore includes areas, both publicly and privately owned and managed, that are accessible by the public.

2.1 What is Good Public Realm?

The Wolverton Regeneration Strategy (MKC, 2004) identifies the primary objectives for the public realm as; *"To create an attractive, safe and clean pedestrian friendly environment, that is interconnected, easy to move through and use for residents, workers and visitors alike."*

'By Design' (CABE, 2001) identifies a good public realm as: *"a place with attractive and successful outdoor areas."*

For Wolverton, various individual components contribute to this, including: "*the arrangement of its paving, planting, lighting, orientation, shelter, signage, street furniture, and the way it is overlooked, as well as the routes which pass through it, and the uses in and next to it"* (By Design, CABE, 2001, p24).

The public realm within Wolverton should pay due regards to the conservation area context . Consequently, there is a close relationship between the design of the public realm and the movement networks which access the town of Wolverton.

In addition: *"how attractive public space is, and how well people treat it, will partly depend on the arrangements made for its management and how easy it is to maintain".* Long-term management strategies are, therefore, important elements in the continued provision of a successful public realm for the town.

The Wolverton Public Realm Design Manual relates to the design and development of all public realm in the town centre. The intention, however, is not to be overly prescriptive in providing structuring principles for design, but to allow room for imaginative design treatment in the future, in locations where this is considered appropriate.

2.2 Best Practice Policy and Guidance

There is a range of policy and guidance that sets out principles for the successful and sustainable design of public realm in our towns. Such guidance has reinforced the importance of town centres as the focus for social and economic life.

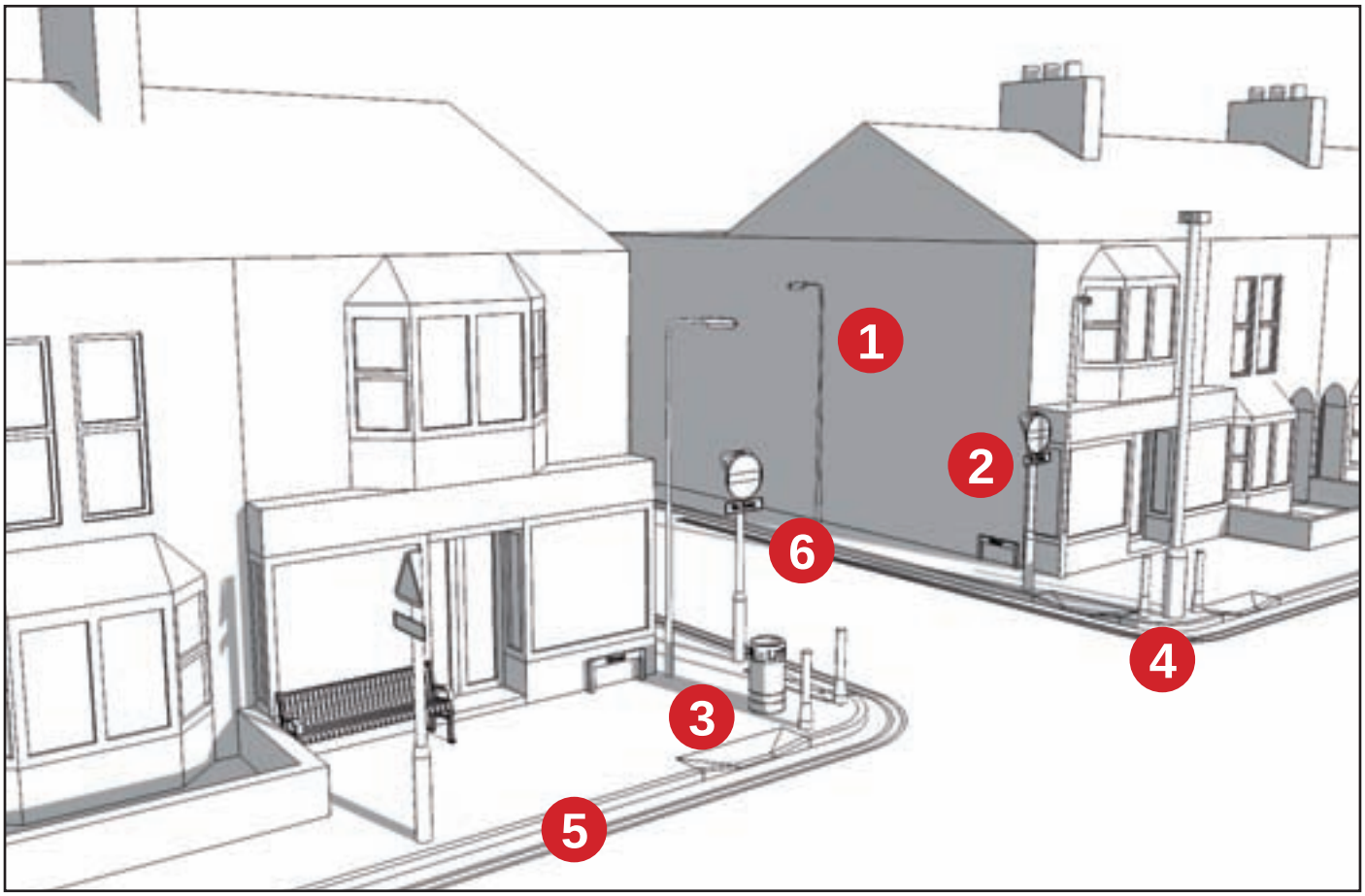
The importance of providing a high quality pedestrian environment to complement the diverse retail, commercial and leisure attractions in town centres is embedded within best practice.

Best practice and Wolverton-specific principles should guide all future design development proposals and projects within the public realm. A number of relevant principles can be drawn from best practice documents to form the basis of all new proposals within the Wolverton public realm (these are set out in Table 1).

Drawing these principles together and applying the new 'family' of materials and furniture should offer the quality and co-ordinated approach to the public realm that is sought by this manual and is underpinned by the Wolverton Regeneration Strategy.

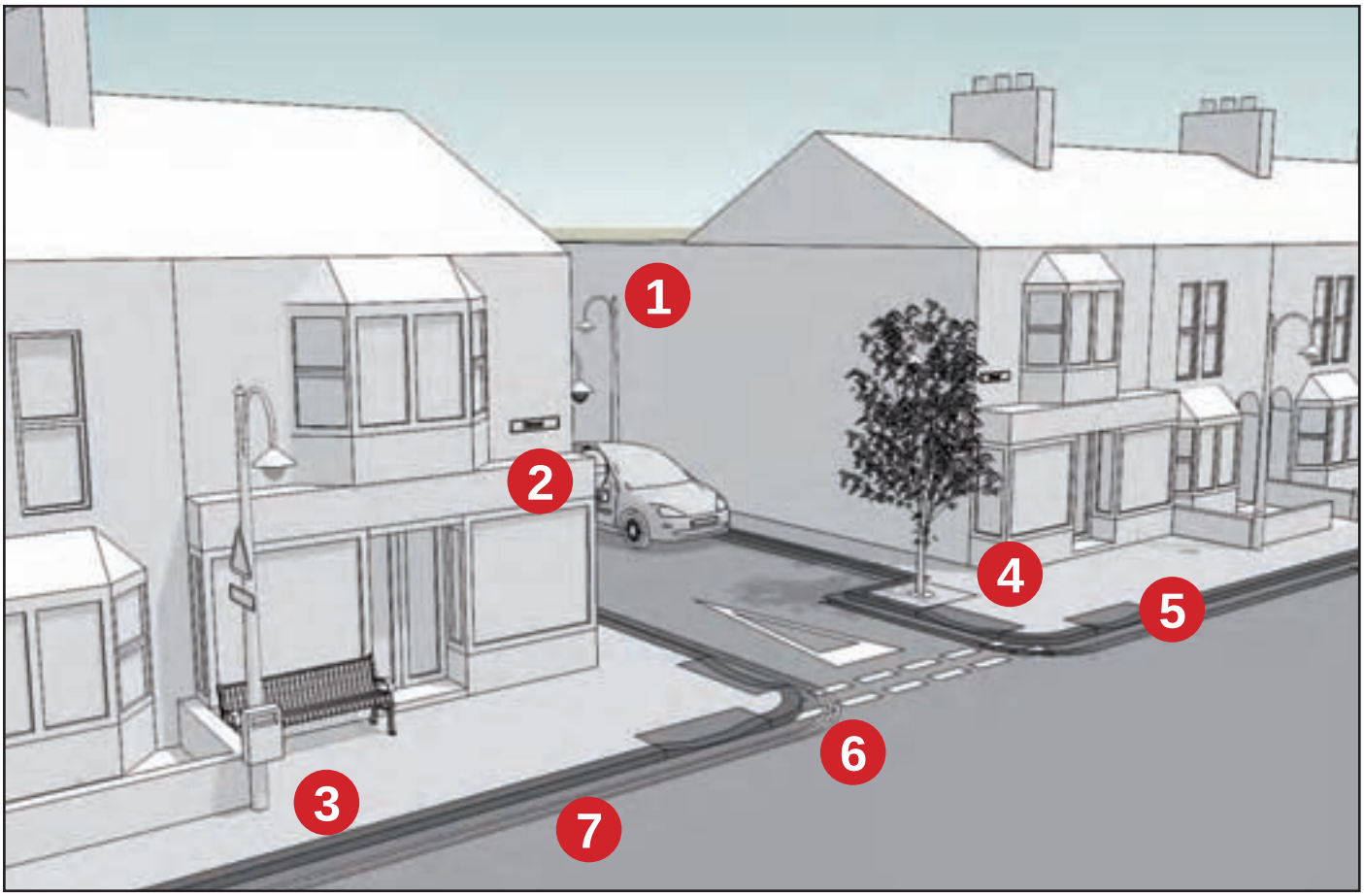
Best practice principles for public realm in Wolverton
Design of the highest quality – not compromised for isolated development or operational imperatives.
A unifying design approach that pays particular attention to the conservation area context – where there is consistency and co-ordination of, with room for richness and imagination in 'special areas'.
Improving the pedestrian environment – with safe, accessible routes and interest at street level.
Easy movement and access for all – with priority given to walking, cycling and public transport.
Creating diversity, variety and richness – where there is a choice of routes, spaces and places to visit or move through – giving people reasons to come to Wolverton and return.
Appropriate and varied scale – which adds interest and defines character, from backways to shopping streets. Wolverton will benefit from a network of public spaces and routes that vary in scale and activity, from the smallest courtyard to larger civic and ceremonial spaces.
Clear orientation and connections – encouraging people to investigate and aiding navigation through landmark buildings and structures, particularly at intersections; together with signage, colour, lighting and public art.
Creating memorable places and spaces – with a streetscape punctuated with memorable places and spaces each offering a distinct aspect and atmosphere.
Meeting the needs of all groups in society – meeting the requirements of a wide range of people, including the young and old, visitors and residents and special user groups.
Removing street clutter – ensuring that pieces of street furniture form part of a consistent 'family', and are of high quality, placed and designed to meet aesthetic and functional standards.
Animation and visual interest – with active frontages, art, lighting and events focussed on key pedestrian routes and destinations.
Integrating public art - inviting the vision, creativity and skills of artists makes spaces distinctive by responding to the site, and the people who use and engage with it.
Designing a safe environment – where all streets and open spaces (whether publicly or privately owned) should be overlooked and bordered by frontages and active uses to provide natural surveillance of the public realm. Opportunities for casual surveillance should be created through the sensitive positioning of building entrances and design of access routes, car parking, cycle routes, etc.
Creating a welcoming microclimate – where spaces need to be sensitively located and carefully designed to capture the sun, provide shelter from the wind and encourage active use.
Ongoing management and maintenance – highest standards of management and maintenance will be met for all aspects of Wolverton public realm.
A sustainable approach – where materials and maintenance regimes are selected to minimise adverse impacts on the environment without damaging or removing the identified original historic features and materials.
A collaborative approach – all stakeholders working together, will help meet the aspirations for a high quality public realm with Milton Keynes Council and Wolverton and Greenleys Town Council working in partnership to co-ordinate the design and decision making process.

Table 1



Existing Scenario

1. Street lighting column-mounted contributing to street clutter.
2. Road signage and information on separate posts.
3. Litter bin obstructing footway.
4. Bollards and unnecessary furniture contribute to street clutter.
5. Gradual loss of original features that once defined the identity of Wolverton's public realm, such as kerb, drainage channel and surface material details.
6. No visual clues to one way street other than easy to miss no entry signs.



Suggested Improvements

1. Street lighting wall-mounted wherever possible. Where lamp columns are used, new Wolverton standard columns would be an improvement.
2. Road signs, road names and information wall-mounted wherever possible. Where this is not possible, signs should be grouped, utilising existing posts such as lamp columns.
3. Unnecessary bollards removed and litter bin column-mounted.
4. Road narrowed to provide visual clues to one way street, providing clear parking bays and creating space for street trees.
5. Pedestrian crossing points defined with a clear change in surface materials.
6. Tightened corner radius on kerbs to maintain pedestrians desire line and reduce vehicle turning speeds.
7. Retain or reinstate modern equivalent of original features which strengthens Wolverton's identity through the public realm

2.3 Enhancing the Character and local identity of Wolverton

The character of an area is best enhanced by respecting its locally distinctive patterns of development, sense of history, culture and traditions. All urban design objectives should seek to improve and contribute to the overall context and identity of Wolverton.

Wolverton was the first purpose built green-field railway town in the country after Robert Stephenson brought the London & Birmingham Railway to Wolverton in 1838.

Wolverton's historic Victorian and Edwardian character and layout should be enhanced when considering any development works. The Future Wolverton vision established the principles of aiming *"to meet the needs of the community and preserve the heritage and identity of the area whilst supporting local diversity."*

The distinctive natural and historic setting, views and local topography and ecology should work as an inspiration for future development. Local materials, scale and texture, craftsmanship and scale of development are covered with the conservation area review document and should reflect the local and regional traditions as highlighted.

Wolverton must aspire to become a place with the highest quality architecture, landscape architecture and public realm design that will enhance and complement its historic character and context.

The future design of the public realm will recognise and enhance the important features and structuring principles of today's Wolverton. These structuring elements are part of the defining character of the town.

The structure of the public realm is intended to maintain, enhance and celebrate these characteristics, but reorder how they are applied, to include the following:

Grid structure

Wolverton's main grid structure of terraced streets and backways dominates the movement network, the public realm and is a key characteristic of the town. This will be maintained and enhanced as a primary element.

A pedestrian and cycle grid will be introduced to the existing street and plot structure.

The finer grain will seek to address some of the modern day drawbacks of the original Victorian grid structure, seeking to:

- provide an improved pedestrian environment by utilising and activating backways;
- creating a comfortable, walkable environment; and
- establish an interconnected network of streets and pedestrian routes directly related to their relative importance within the townscape.

Family of street furniture and surface materials

The original Wolverton Streetscape would have delivered a high quality public realm with a consistent approach to detailing, street furniture, landscape, colour and materials.

However, developments and highway works over the years have moved away from this original concept in an unco-ordinated and piecemeal manner.

In developing a new coherent approach, there is the opportunity to review existing elements to ensure they are consistent with the principles of the Wolverton Regeneration Strategy while retaining the important original features of the conservation area.

The manual re-establishes a co-ordinated strategy for street materials and signage, street furniture, typical detailing, lighting, pedestrian signage and planting.

The new ‘family’ of public realm components and strategy for implementation must properly address present management and maintenance issues, financial considerations, accessibility, mobility standards and embrace new technologies, standards and efficiencies.

Street furniture, materials and finishes will be selected using this criteria to deliver a high quality public realm capable of meeting the challenges of a historic town such as Wolverton.

2.4 Addressing the parking

An increasing and daily problem for the majority of residents and the single most complained about issue that faces Wolverton is its parking provision.

The need to balance the requirements of vehicles with the need for a safe pedestrian and cycling environment will be recognised through the use of appropriate parking control measures such as primrose yellow lines in the conservation area.

Any physical measures affecting parking should reflect the principles of this guide.

2.5 Public Realm Movement Network

For Wolverton to improve and prosper it is essential that all types of user can freely move around and access all areas of the town.

This section describes how design can influence how people move around Wolverton's public realm.
It considers two main issues:

- the interaction of access and movement with the public realm in public spaces, backways, streets and at road junctions; and
- provision of an equitable and sustainable transport system for Wolverton where the specific needs of different individuals or groups including pedestrians, cyclists, public transport users and motorists can be addressed.

The aspirations set out in the Milton Keynes Local Transport Plan 3 (2012) aim to provide excellent connections and interchange facilities with all other city and regional wide public transport services.

These improvements will contribute to increased use of public transport in the future; and at a national and local level there is a desire to encourage more sustainable forms of travel. A number of further initiatives, including a Cycling Strategy and Wayfinding Strategy will support walking and cycling trips.

In access and movement terms there are four primary users of Wolverton Town Centre:

- Pedestrians;
- Cyclists;
- Public transport users; and
- Motorists.

Pedestrians

A less constrained and more intuitive pedestrian movement will be encouraged to increase activity on streets in a safe manner and this will be supported by:

- improved wayfinding and orientation that promotes key walking routes and pedestrian access into and through Wolverton;
- the promotion of safe crossing points at appropriate junctions; and
- improvements to backways.

Cyclists

Cycling will be encouraged and promoted in the following ways:

- improved wayfinding and orientation that promotes key cycling routes;
- streets designed to restrain vehicle speeds and create cycle friendly environments; and
- provision of improved cycle parking facilities at appropriate locations throughout Wolverton.

While cycling will be promoted on all roads within Wolverton, north-south and east-west routes that connect schools and leisure facilities will be identified for cyclists wishing to traverse Wolverton.

Public Transport

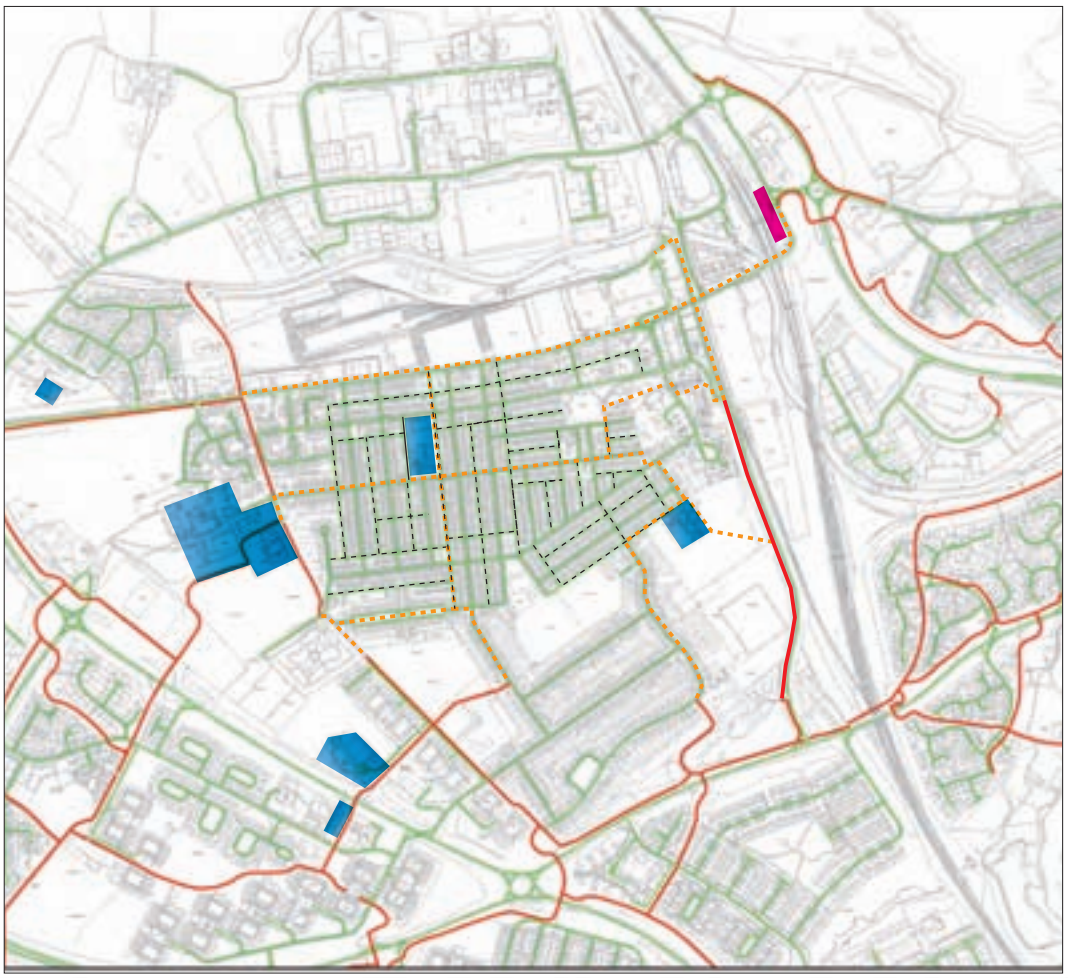
Public transport, which includes trains, buses, and taxis, will be promoted and encouraged with the specific intention of significantly increasing the number of people using public transport on a regular basis.

A framework for improvement of Wolverton's bus stops and routes has been identified. Waiting facilities along routes will be improved.

Taxi facilities are proposed for Wolverton Train Station.

Motorists

For the economic prosperity of Wolverton to be enhanced it is vital to provide good facilities for motorists. While the needs of other users are being addressed, motorists should also find that their experience of Wolverton will change. This will be achieved through improved parking facilities at town centre locations.



Background Documents:

Wolverton: Refreshing the vision (March 2011)
This document was a prequel to the Wolverton Public Realm Design Guide and was essentially an analysis of the current states of Wolvertons Public Realm.

Wolverton Conservation Area Review (April 2009)

Wolverton Area Traffic Review (April 2009)

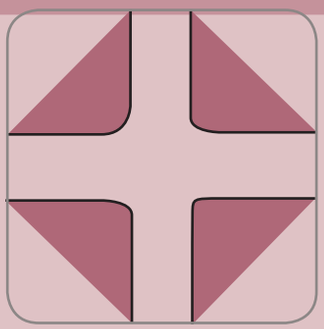
Wolverton Area Action Plan (October 2006)

Wolverton Regeneration Strategy (September 2004)

Streets for all South East, English Heritage (March 2005)

Commission for Architecture and the Built Environment (2000) By Design | Urban Design in the Planning system: towards better practice.

Department for Transport (2007) Manual For Streets



junctions

JUN1 Fine Grain Victorian Core (1850-1900)

JUN1A Carriageway Crossroads Junction
JUN1B Carriageway / Backway Junction
JUN1C Carriageway / Cycleway Junction
JUN1D Carriageway T-Junction

JUN2 Coarse Grain Later Development Area (1900-1920)

JUN2A Carriageway Crossroads Junction
JUN2B Carriageway / Backway Junction
JUN2C Carriageway / Cycleway Junction
JUN2D Carriageway T-Junction

For illustration of these areas, refer to introductory document (page 7).

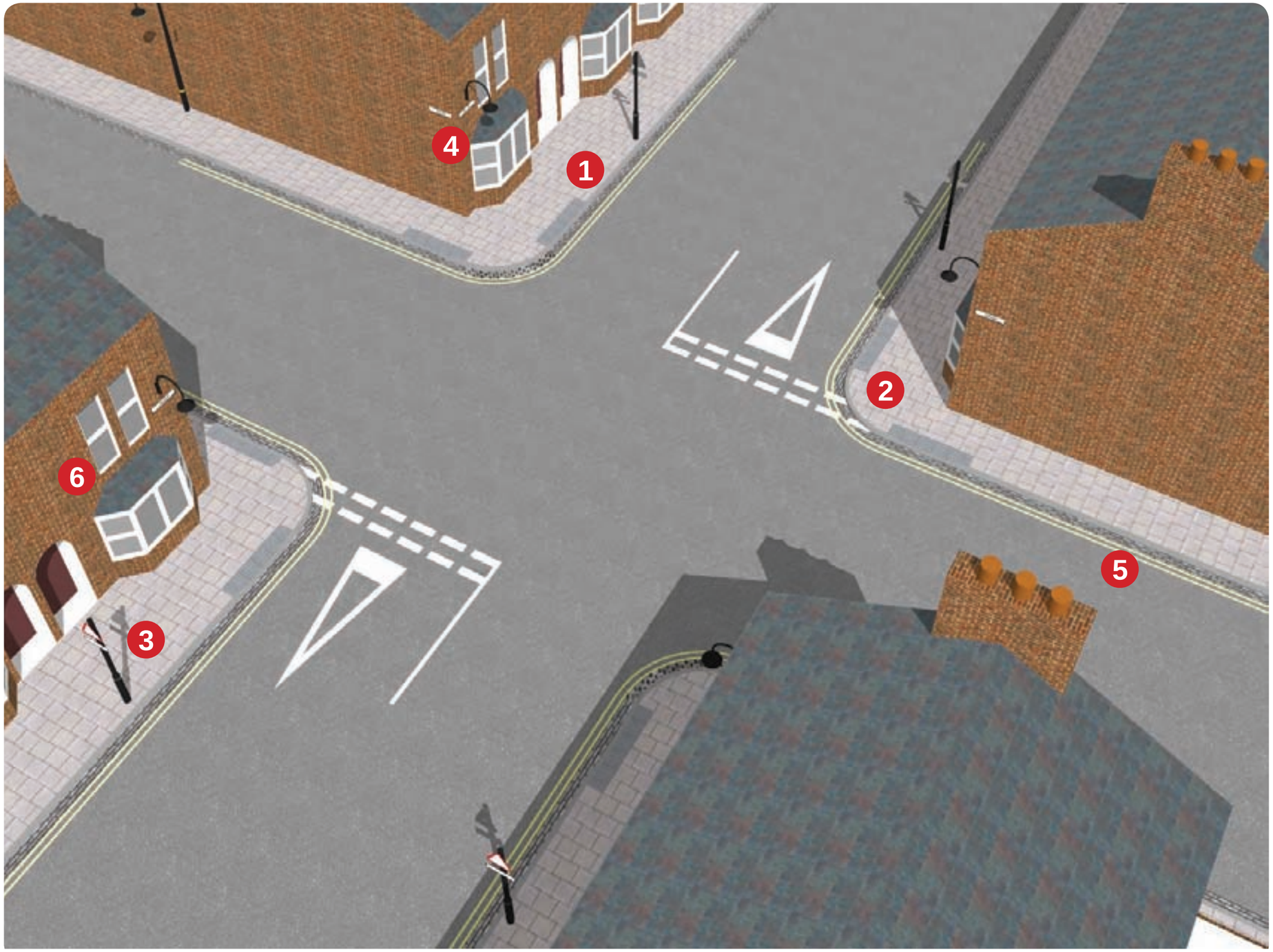
JUN3 All Areas - One-Way Junction Exit Detail

The Main Features

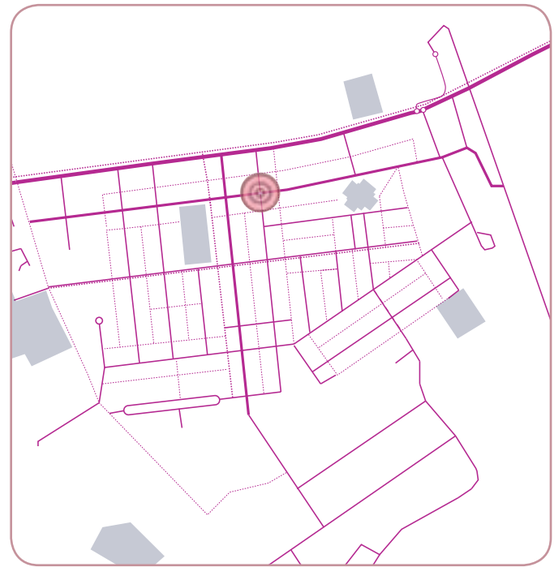
1. Improved pedestrian route definition.
2. Adjusted corner radii.
3. Minimum street furniture clear of pedestrian movement.
4. Wall-mounting of signage/lighting where appropriate.
5. Retention and reinstatement of historical features.
6. Active building fronts with pedestrian scale lighting.

Carriageway Crossroads Junction

(Fine Grain Victorian)



Details shown serve to echo the traditional Victorian character and street layout of Wolverton. The adjustment of corner radii will slow traffic, whilst allowing more space for pedestrian crossing and improved route definition. Clear footways and scaled lighting will improve accessibility and ease of movement for all.



Carriageway
Crossroads Junction
(Fine Grain Victorian)

Setting out Principles

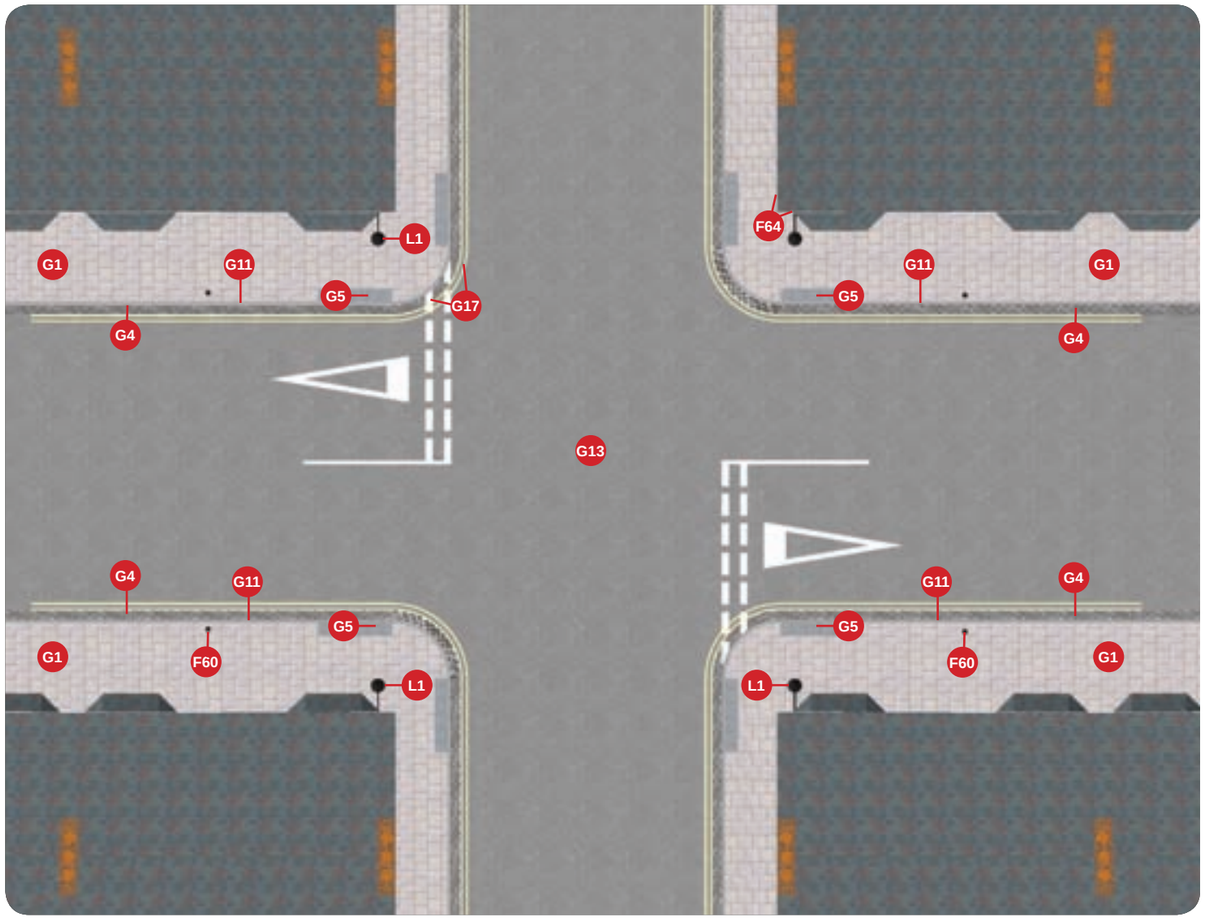
- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – 1.5m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Lighting
  – 0.25m offset to rear of footpath to follow property boundary line.
  – positioned asymmetrically on rear of footways at proximity to property access paths.
  – wall-mounted wherever possible.
- Road markings
  – double yellow lines to extend 10m back from junction.

Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G4 Surface water drainage gully. Channel laid in stretcher course in staffordshire blue and brindle brick
- G5 Staffordshire blue tonal contrast tactile brick paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G11 Staffordshire blue bullnosed kerbs
- G12 Paving inset drainage channels
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings

- F60 Traffic signs
- F64 Street name plates (wall-mounted where possible)

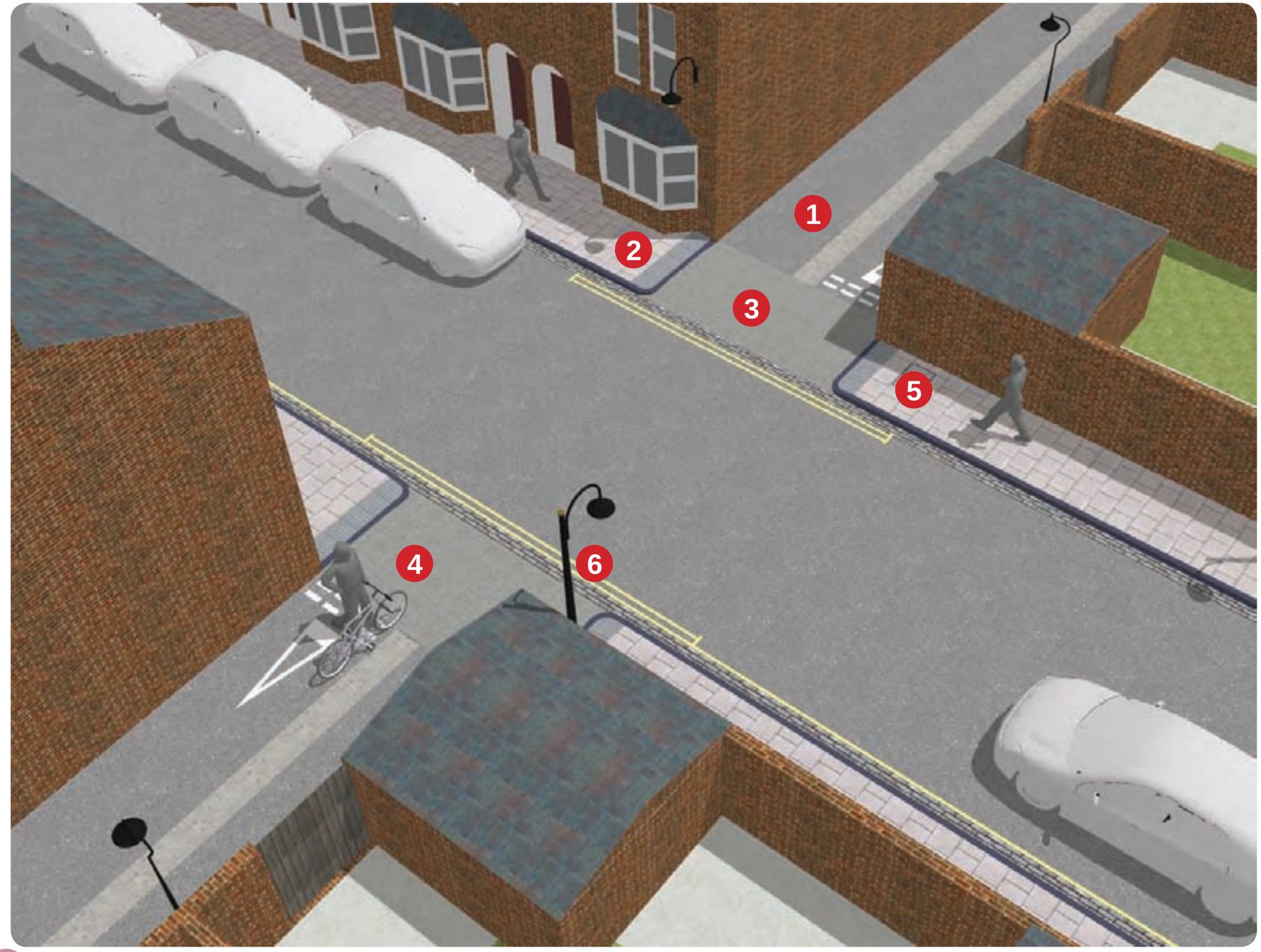
- L1 General highway lighting (preferably wall-mounted where possible)



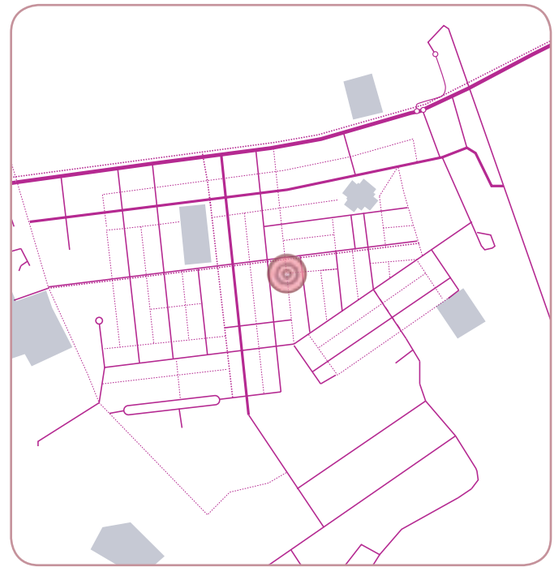
Carriageway/Back-way Junction
(Fine Grain Victorian)

The Main Features

1. Direct pedestrian routes.
2. Adjustment of existing corner radii and kerb alignment at crossings.
3. Change of surface treatment on crossings.
4. Backway crossings on half-raised tables for ease of access.
5. Minimum Street furniture clear of pedestrian movement.
6. Lighting to back of footway aiding illumination of pedestrian routes.



Details shown serve to echo the traditional Victorian backways of Wolverton, complete with original features such as setted drainage channels. Backways form direct pedestrian routes that will be uncluttered and well-lit for safety. The careful use of raised tables at backway junctions retains accessibility and ease of movement for all.



Carriageway/Backway Junction
(Fine Grain Victorian)

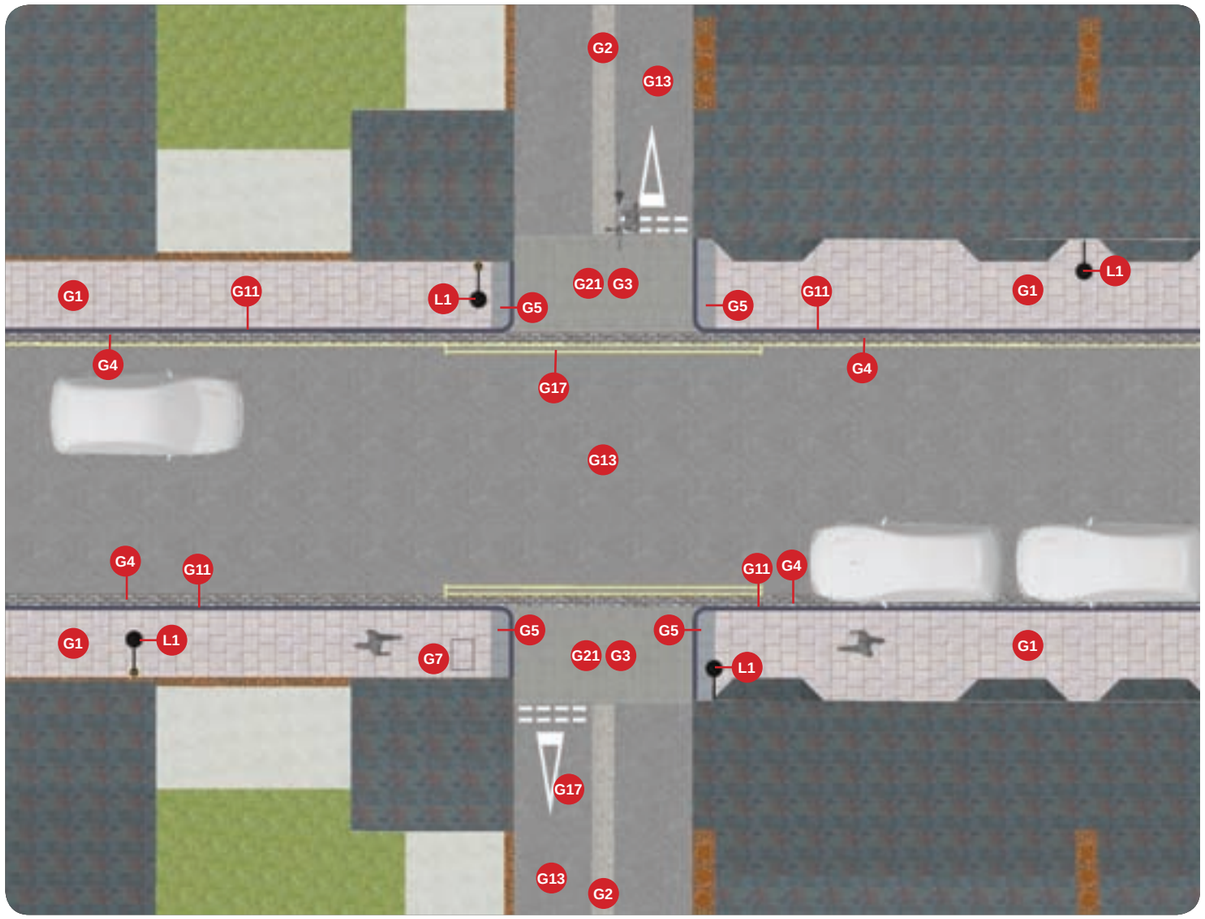
Setting out Principles

- Lighting
  – 0.25m offset to rear of footpath to follow building line.
- – positioned asymmetrically on rear of footways.
  – wall-mounted wherever possible.
- Backway Lighting
  – 0.25m offset to edges of backway.
  – wall-mounted wherever possible.
- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m.
- Kerb radii
  – __m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
  – concrete sett crossing half-raised with semi-dropped kerb at backway.
  – ramps from carriageway to new level.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Road markings
  – double yellow lines extend 0.5m past mouth of backway.

Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G2 Conservation Granite setts 100 x 100 staggerbond
- G3 Precast concrete blocks 200 x 100 herringbone bond laid at 45 degrees to carriageway with contrasting mid grey colour at crossing points
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick.
- G5 Staffordshire blue tonal contrast tactile brick paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G11 Staffordshire blue bullnosed kerbs
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- G21 Raised tables at backway crossings

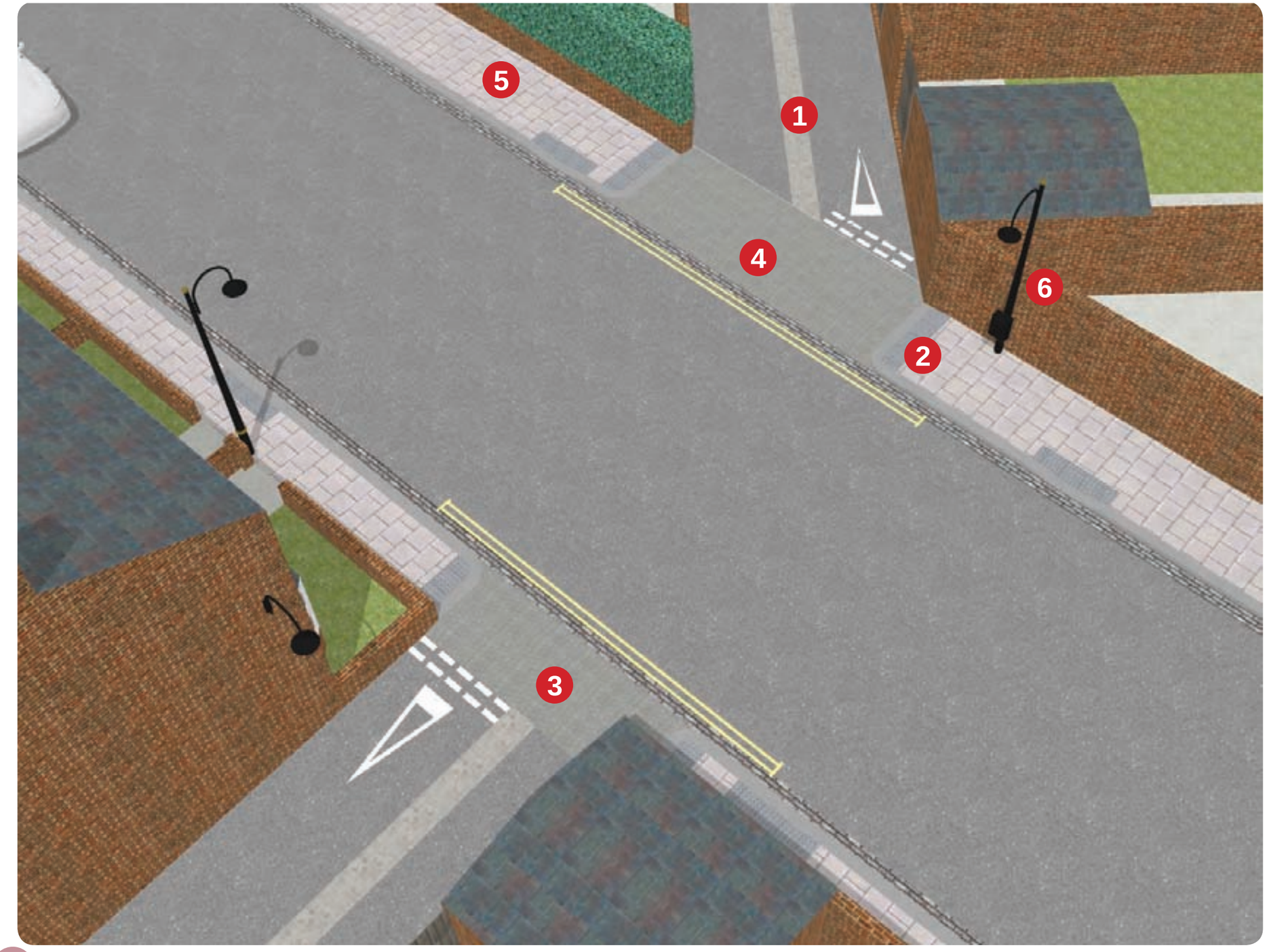
- L1 General highway lighting
- L2 Footway lighting



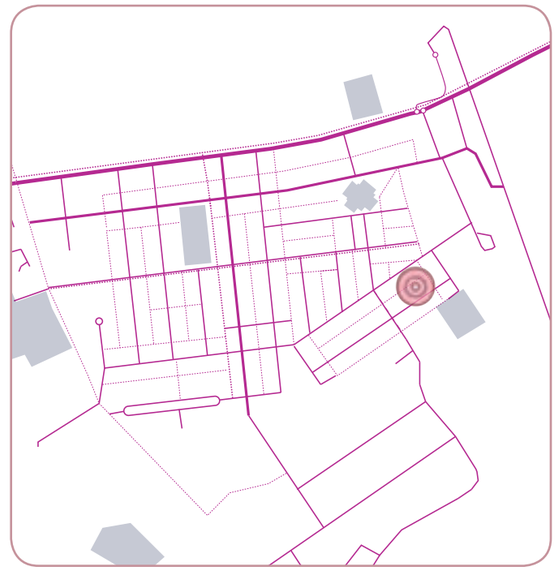
Carriageway/ Cycleway Junction
(Fine Grain Victorian)

The Main Features

1. Improved cycle/pedestrian route definition.
2. Adjustment of existing corner radii and kerb alignment at crossings.
3. Change of surface treatment on crossings.
4. Cycleway crossings on half-raised tables.
5. Minimum street furniture clear of pedestrian movement.
6. Lighting to back of footway illuminating pedestrian routes.



Details shown serve to echo the traditional Victorian backways of Wolverton, whilst making provision for suggested main cycle routes.The careful use of half-raised tables, change of surface material and tonal contrast at all crossing points, combined with a tighter corner radius will improve accessibility and ease of movement for all users of the cycleway.



This backway junction on Green Lane, near Moon Street has been selected to become a cycleway junction for the following reasons:

- It is a direct route to Bushfield school, already attracting a high footfall, including many cyclists.
- It is currently unsafe, so it is anticipated that the recommmendations will make the junction safer and more accessible for all users.

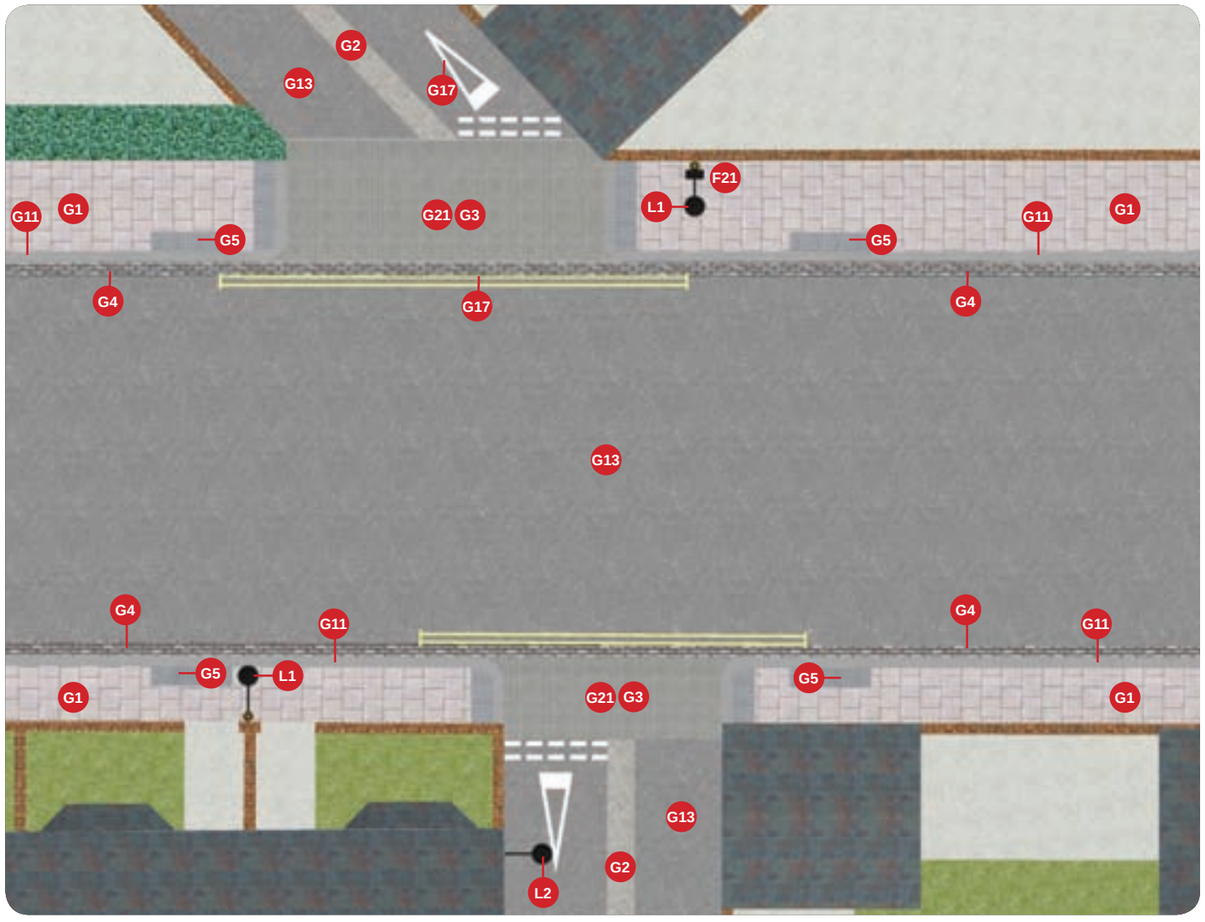
Carriageway/Cycleway Junction
(Fine Grain Victorian)

Setting out Principles

- Lighting
  – 0.25m offset to rear of footpath to follow building line.
- – positioned asymmetrically on rear of footways.
  – wall-mounted wherever possible.
- Cycleway Lighting
  – 0.25m offset to edges of cycleway.
  – wall-mounted wherever possible.
- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – 1.5m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
  – concrete sett crossing half-raised with semi-dropped kerb at cycleway.
  – ramps from carriageway to new level.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Road markings
  – double yellow lines extend past mouth of cycleway by 0.5m.
  – cycleway markings to be positioned before raised crossing.

Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G2 Conservation Granite setts 100 x 100 staggerbond
- G3 Precast concrete blocks 200 x 100 herringbone laid at 45 degrees to carriageway with contrasting mid grey colour at crossing points
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick.
- G5 Staffordshire blue tonal contrast tactile paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G11 Staffordshire blue bullnosed kerbs
- G12 Paving inset drainage channels
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- G21 Raised tables at cycleway crossings
- F21 Column-mounted litter bin
- L1 General highway lighting
- L2 Footway lighting

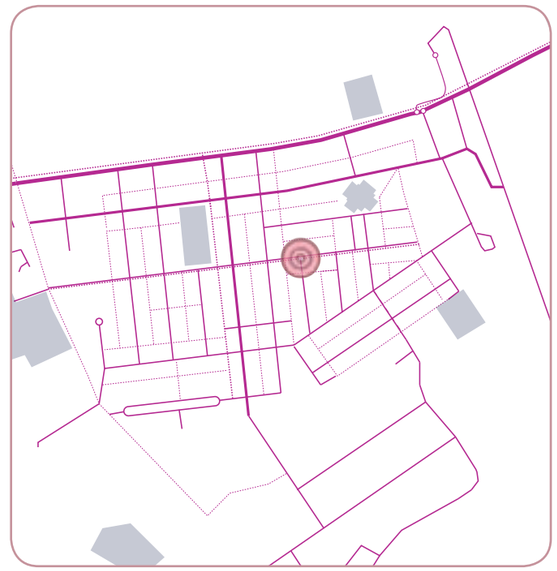


The Main Features

1. Improved pedestrian route definition.
2. Adjusted corner radii.
3. Minimum street furniture clear of pedestrian movement.
4. Wall-mounting of signage/lighting where appropriate.
5. Retention and reinstatement of historical features.
6. Active building fronts with pedestrian scale lighting.

Carriageway T-Junction (Fine Grain Victorian)

Details shown serve to echo the traditional Victorian character and street layout of Wolverton. The adjustment of corner radii will slow traffic, whilst allowing more space for pedestrian crossing and improved route definition. Clear footways and scaled lighting will improve accessibility and ease of movement for all.



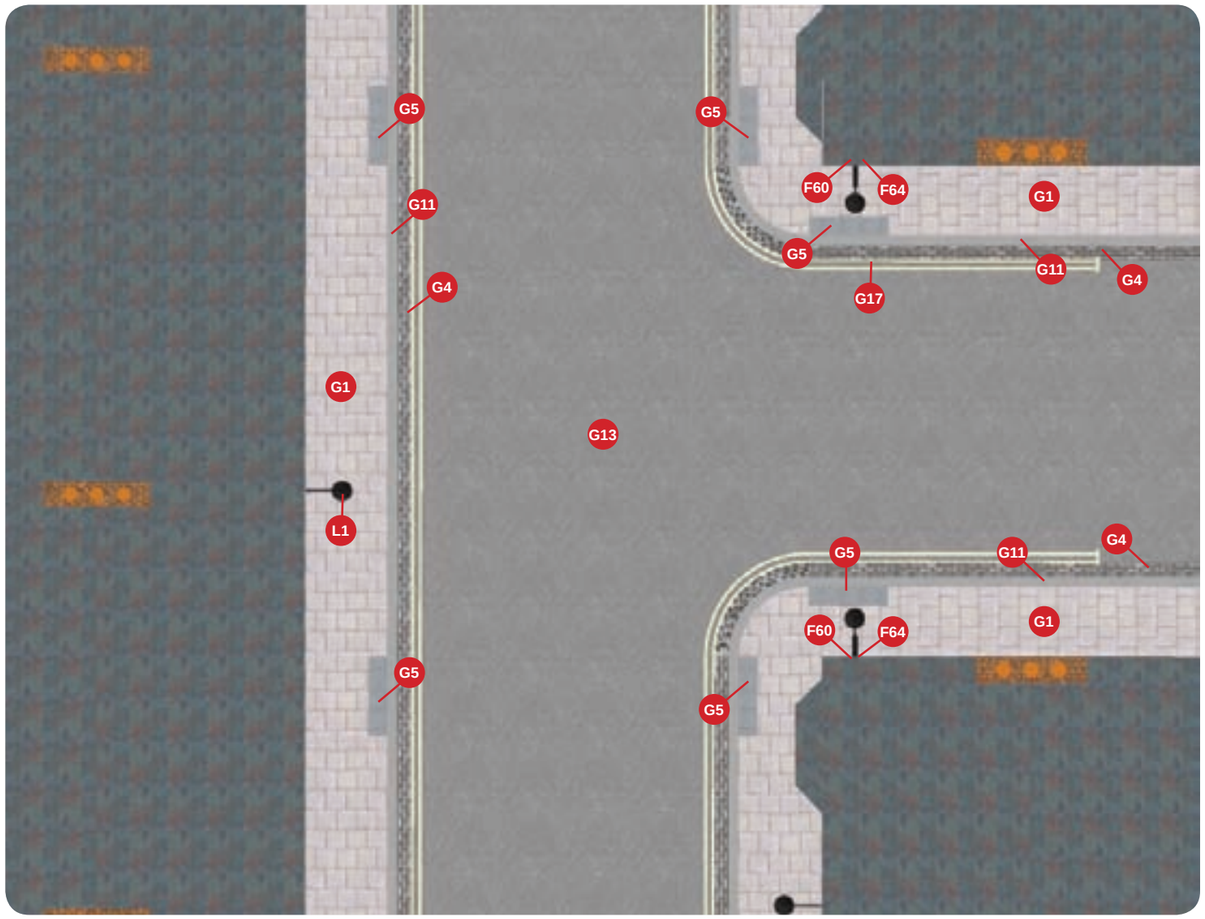
Carriageway T-Junction
(Fine Grain Victorian)

Setting out Principles

- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – 1.5m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Lighting
  – 0.25m offset to rear of footpath to follow property boundary line.
  – positioned asymmetrically on rear of footways at proximity to property access paths.
  – wall-mounted wherever possible.
- Road markings
  – double yellow lines extend 10m back from junction.

Public Realm Elements

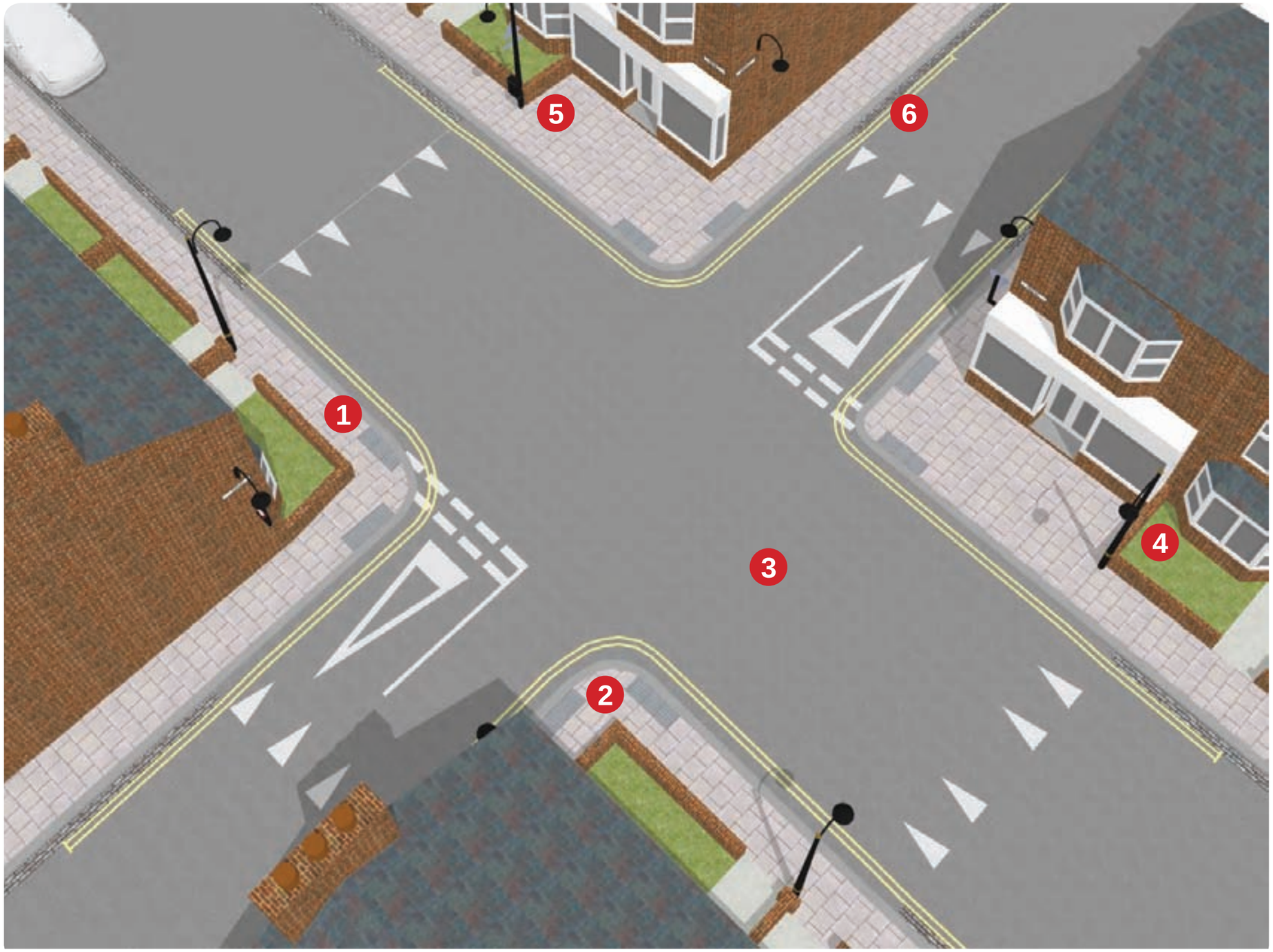
- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick
- G5 Staffordshire blue tonal contrast tactile paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G11 Staffordshire blue bullnosed kerbs
- G12 Paving inset drainage channels
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- F60 Traffic signs
- F64 Street name plates (wall-mounted where possible)
- L1 General highway lighting (preferably wall-mounted where possible)



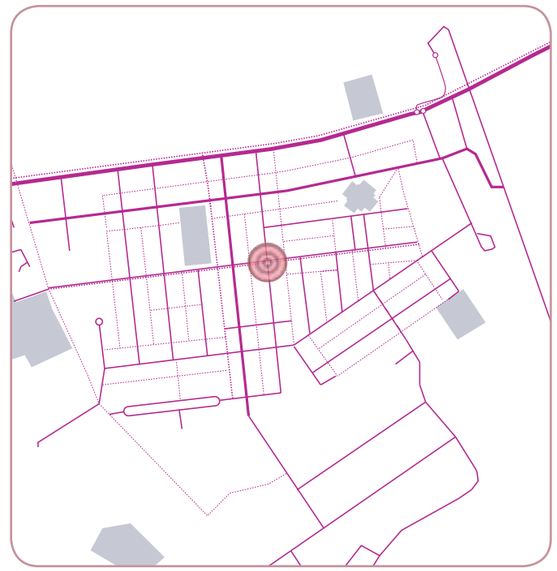
Carriageway Crossroads Junction
(Coarse Grain Later Areas)

The Main Features

1. Direct pedestrian routes.
2. Adjusted corner radii.
3. Raised table with a change of surface at crossing identifies a pedestrian presence and eases access.
4. Active building fronts with pedestrian scale lighting.
5. Minimum Street furniture clear of pedestrian movement.
6. Retention and reinstatement of historical features.



Details shown serve to echo the traditional Victorian character and street layout of Wolverton. The adjustment of corner radii and introduction of raised tables will slow traffic, facilitating safe pedestrian crossing and improving route definition. Clear footways and scaled lighting will improve accessibility and ease of movement for all.



Carriageway
Crossroads Junction
(Coarse Grain Later Areas)

Setting out Principles

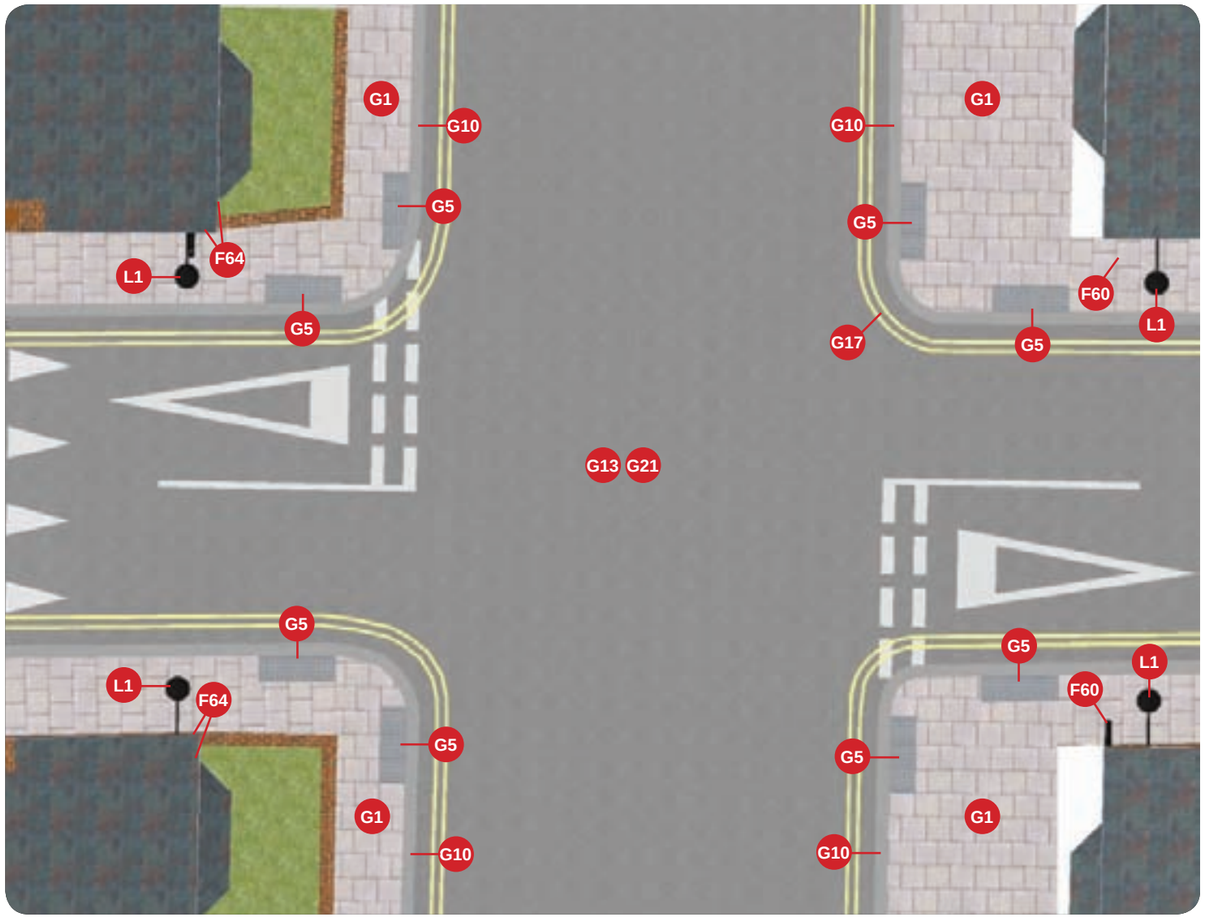
- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – 1.5m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Lighting
  – 0.25m offset to rear of footpath to follow property boundary line.
  – positioned asymmetrically on rear of footways at proximity to property access paths.
  – wall-mounted wherever possible.
- Road markings
  – double yellow lines to extend 10m back from junction.

Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick
- G5 Staffordshire blue tonal contrast tactile paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G10 Granite conservation kerbs
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- G21 Raised table

- F60 Traffic signs
- F64 Street name plates (wall-mounted where possible)

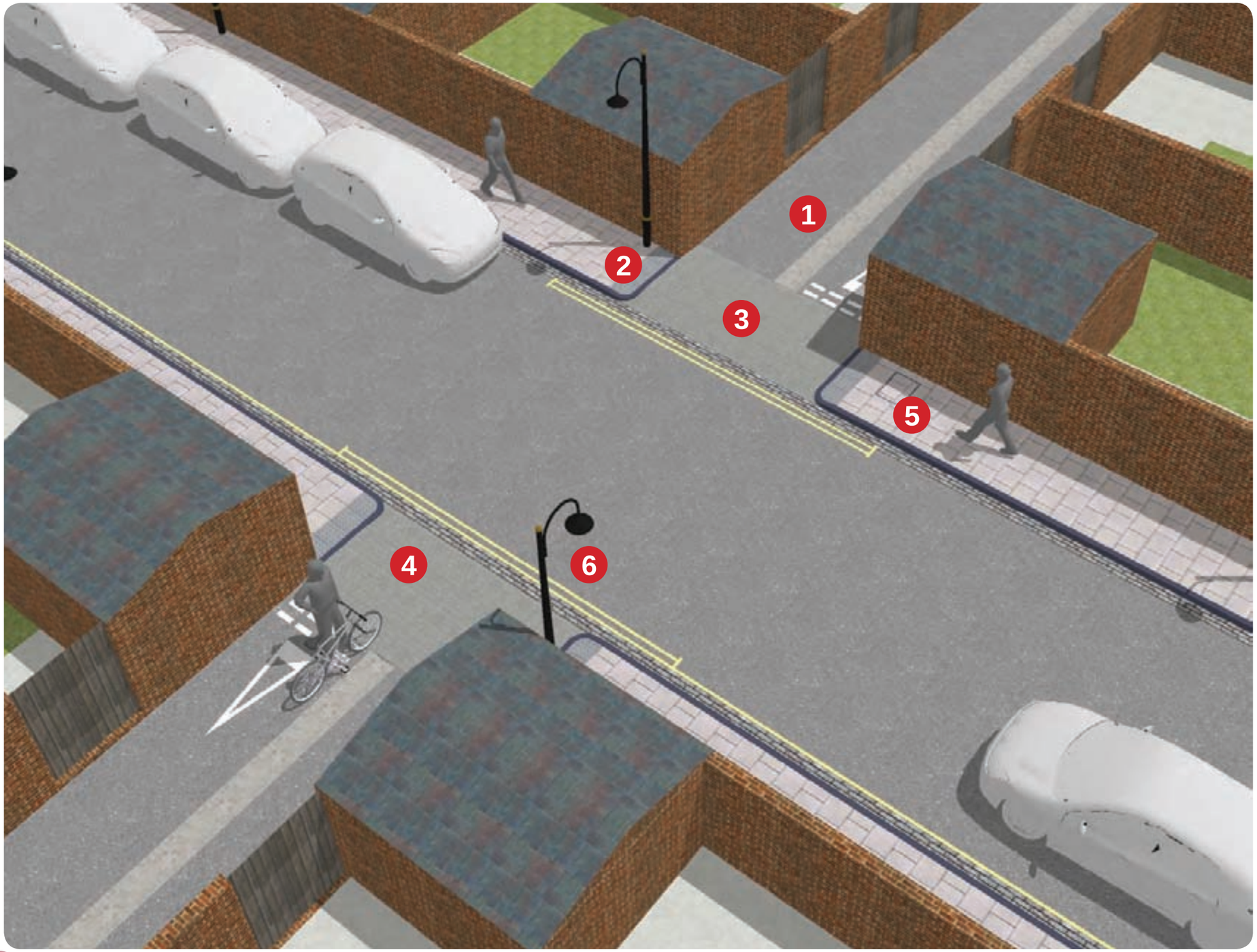
- L1 General highway lighting (preferably wall-mounted where possible)



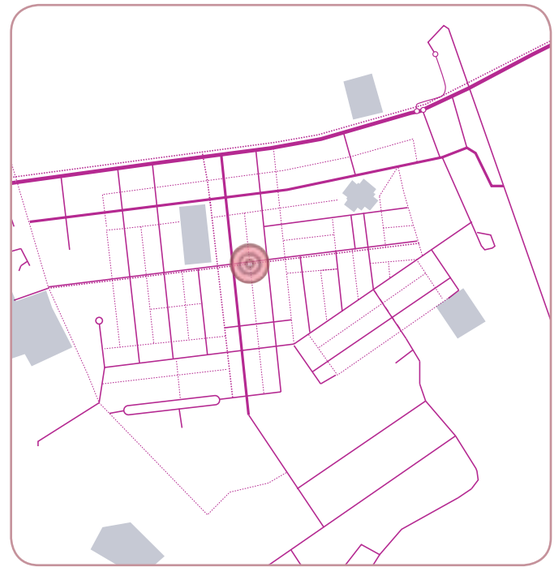
Carriageway/Backway Junction
(Coarse Grain Later Areas)

The Main Features

1. Direct pedestrian routes.
2. Adjustment of existing corner radii and kerb alignment at crossings.
3. Change of surface treatment on crossings.
4. Backway crossings on half-raised tables for ease of access.
5. Minimum Street furniture clear of pedestrian movement.
6. Lighting to back of footway aiding illumination of pedestrian routes.



Details shown serve to echo the traditional Victorian backways of Wolverton, complete with original features such as setted drainage channels. Backways form direct pedestrian routes that will be uncluttered and well-lit for safety. The careful use of raised tables at backway junctions retains accessibility and ease of movement for all.



Carriageway/Backway Junction
(Coarse Grain Later Areas)

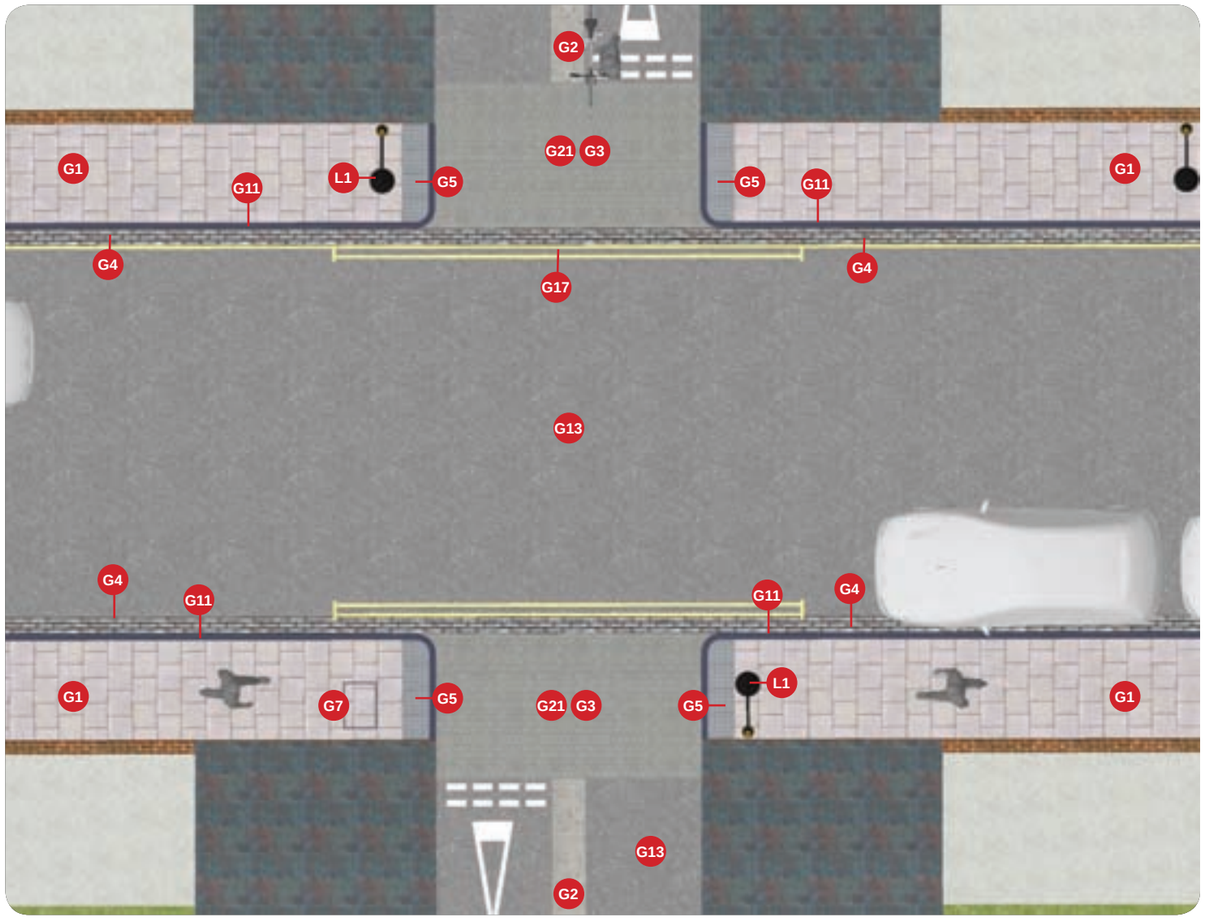
Setting out Principles

- Lighting
  – 0.25m offset to rear of footpath to follow building line.
- – positioned asymmetrically on rear of footways.
  – wall-mounted wherever possible.
- Backway Lighting
  – 0.25m offset to edges of backway.
  – wall-mounted wherever possible.
- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m.
- Kerb radii
  – __m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
  – concrete sett crossing half-raised with semi-dropped kerb at backway.
  – ramps from carriageway to new level.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Road markings
  – double yellow lines extend 0.5m past mouth of backway.

Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G2 Conservation Granite setts 100 x 100 staggerbond
- G3 Precast concrete blocks 200 x 100 herringbone bond laid at 45 degrees to carriageway with contrasting mid grey colour at crossing points
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick.
- G5 Staffordshire blue tonal contrast tactile brick paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G11 Staffordshire blue bullnosed kerbs
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- G21 Raised tables at backway crossings

- L1 General highway lighting

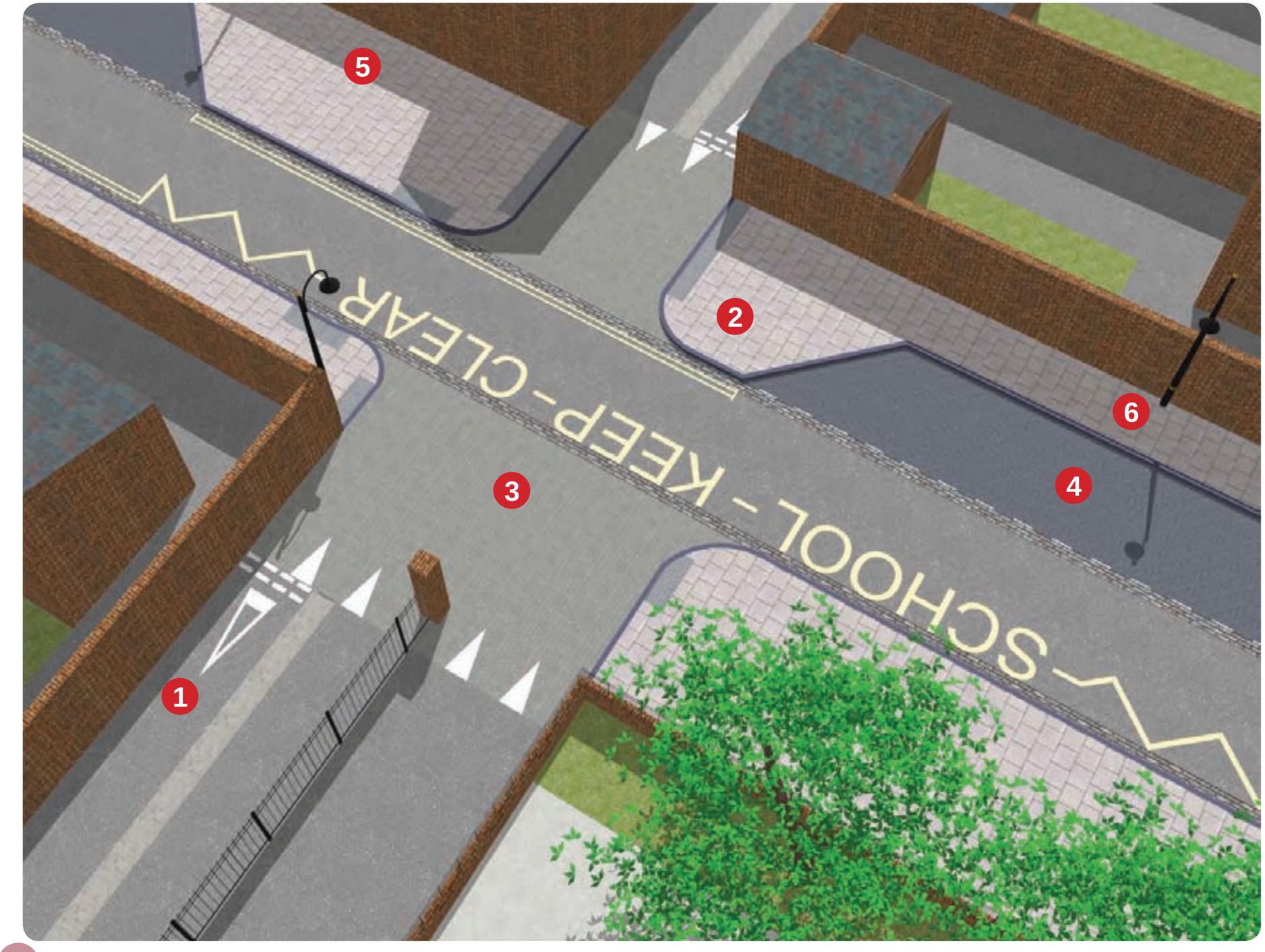


The Main Features

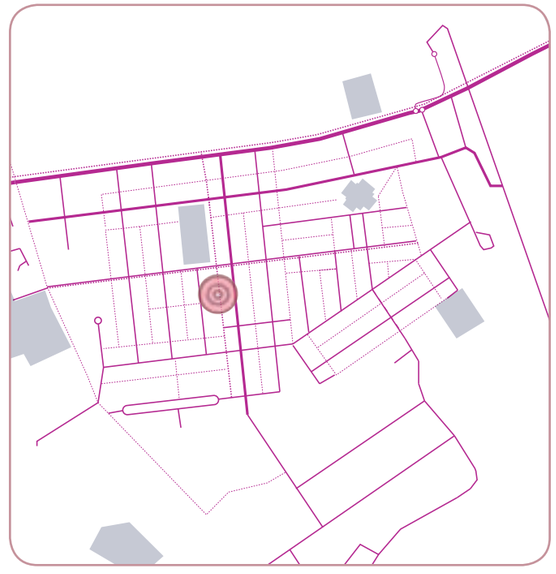
1. Improved cycle/pedestrian route definition.
2. Adjustment of existing corner radii and kerb alignment at crossing.
3. Raised table with a change of surface at crossing identifies a pedestrian presence and eases access.
4. Existing parking spaces retained before the Wyvern school.
5. Minimum street furniture clear of pedestrian movement.
6. Lighting to back of footway aiding illumination of pedestrian routes.

Carriageway/Cycleway Junction

(Coarse Grain Later Area)



Details shown serve to echo the traditional Victorian backways of Wolverton, whilst making provision for main cycle routes. The use of raised tables, change of surface material and tonal contrast allows for a junction that is usable for all with reduced vehicle speeds, parking provision and safe crossing points for pedestrians and cyclists.



This backway junction on Aylesbury Street, adjacent to the Wyvern school has been selected to become a cycleway junction for the following reasons:

- It is a direct route to school, already attracting a high footfall, including many cyclists.
- By arranging the junction with traffic calming measures and shared surfaces, the junction will become safer and more accessible for all users.

Carriageway/Cycleway Junction
(Coarse Grain Later Area)

Setting out Principles

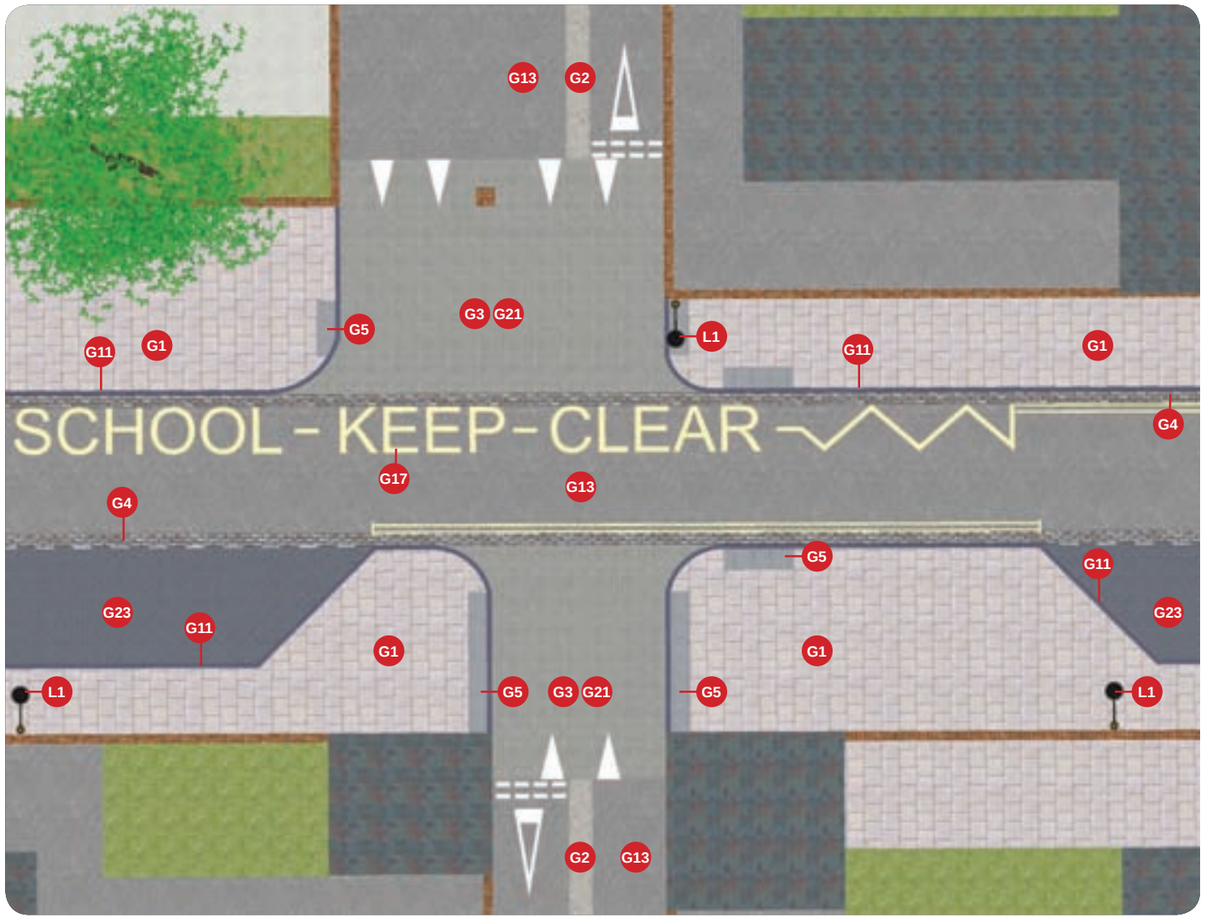
- Lighting
  – 0.25m offset to rear of footpath to follow building line.
  – positioned asymmetrically on rear of footways.
  – wall-mounted wherever possible.
- Cycleway Lighting
  – 0.25m offset to edges of cycleway.
  – wall-mounted wherever possible.
- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – __m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
  – concrete sett crossing half-raised with semi-dropped kerb at cycleway.
  – ramps from carriageway to new level.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Road markings
  – double yellow lines extend past mouth of cycleway by 0.5m.
  – cycleway markings to be positioned before raised crossing.

Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G2 Conservation Granite setts 100 x 100 staggerbond
- G3 Precast concrete blocks 200 x 100 herringbone bond laid at 45 degrees to carriageway with contrasting mid grey colour at crossing points
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick
- G5 Staffordshire blue tonal contrast tactile paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G11 Staffordshire blue bullnosed kerbs
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- G21 Raised table at cycleway crossing
- G23 Parking bays
- G25 Tree surround

- F10 Fixed bollards
- F50 Pedestrian guard rail
- F60 Traffic signs

- L1 General highway lighting
- L2 Footway lighting



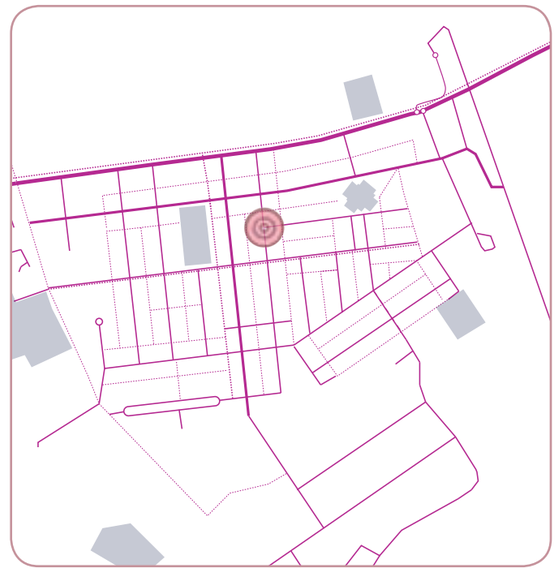
The Main Features

1. Improved pedestrian route definition.
2. Adjusted corner radii.
3. Minimum street furniture clear of pedestrian movement.
4. Wall-mounting of signage/lighting where appropriate.
5. Retention and reinstatement of historical features.
6. Active building fronts with pedestrian scale lighting.

Carriageway T-Junction

(Coarse Grain Later Areas)

Details shown serve to echo the traditional Victorian character and street layout of Wolverton. The adjustment of corner radii will slow traffic, whilst allowing more space for pedestrian crossing and improved route definition. Clear footways and scaled lighting will improve accessibility and ease of movement for all.



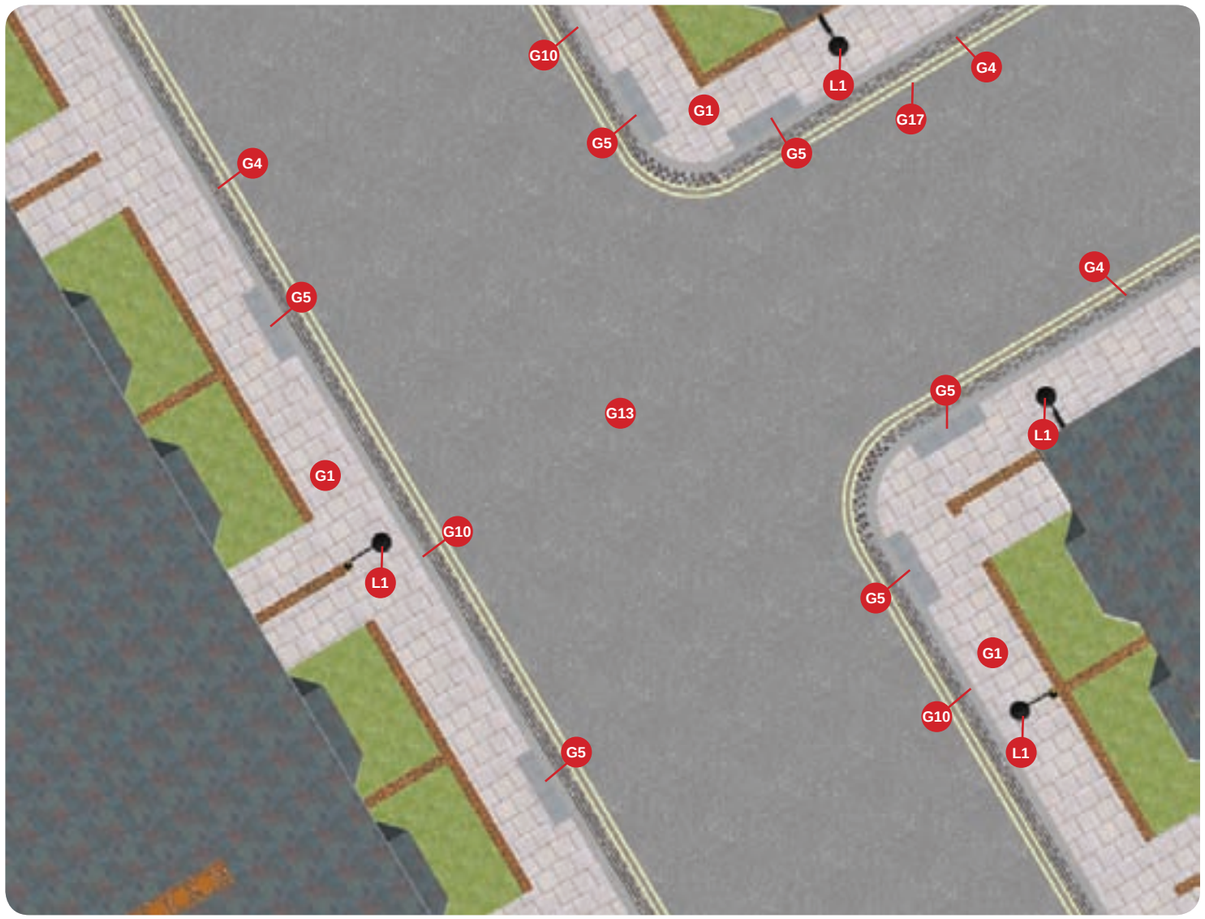
Carriageway
T-Junction
(Coarse Grain Later Areas)

Setting out Principles

- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – 1.5m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Lighting
  – 0.25m offset to rear of footpath to follow property boundary line.
  – positioned asymmetrically on rear of footways at proximity to property access paths.
  – wall-mounted wherever possible.
- Road markings
  – double yellow lines extend 10m back from junction.

Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick
- G5 Staffordshire blue tonal contrast tactile paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G10 Granite conservation kerbs
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- F60 Traffic signs
- F64 Street name plates
- L1 General highway lighting

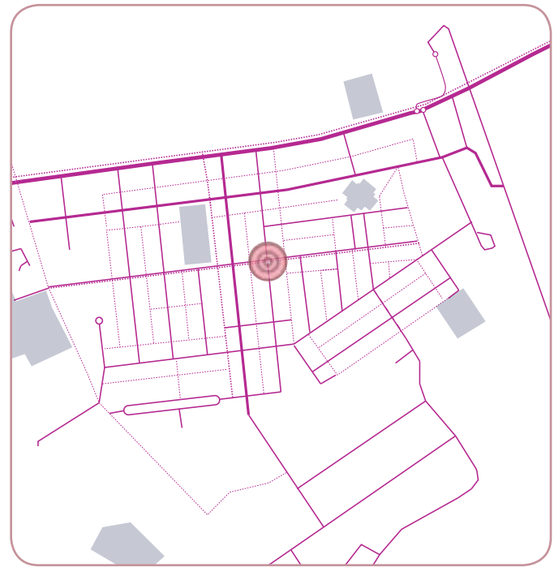


One-Way Junction Exit Detail
(All Areas)

The Main Features

1. Greenery introduced to soften the landscape.
2. Adjusted corner radii to slow traffic.
3. Kerb built out to accommodate tree pit and create a single lane for traffic movement.
4. Improved pedestrian route definition.
5. Car parking bays created due to new kerb alignment.
6. Retention and reinstatement of historical features.

This layout aims to include soft landscaping and greenery into the Wolverton street scene by utilising the exit junctions of any one-way roads. By building the kerb out, a tree pit can be accommodated, along with a single lane for vehicular movement. This layout creates additional car parking bays and affords more space for pedestrians, improving access for all.



One-Way Junction
Exit Detail
(All Areas)

Setting out Principles

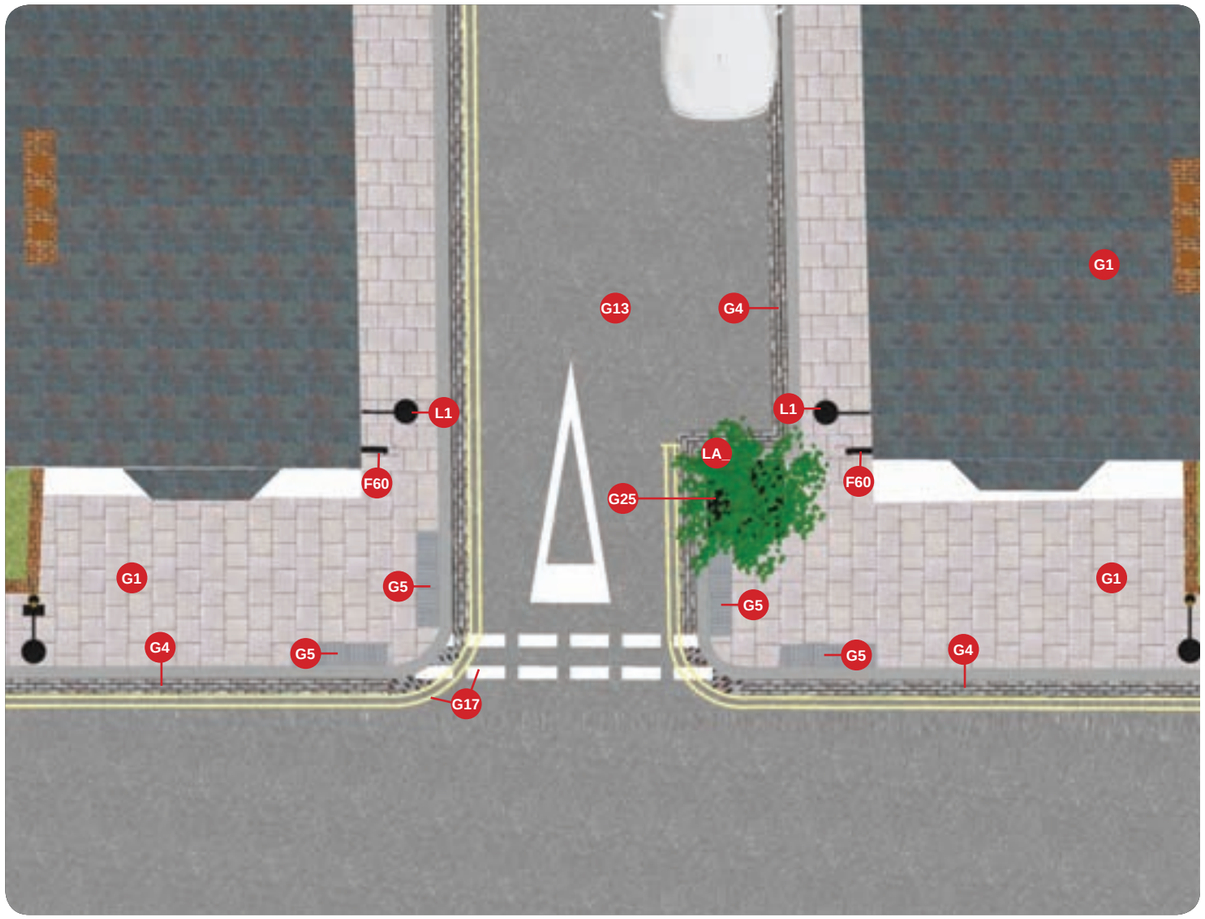
- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – 1.5m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible
  – back to back when post mounted.
- Lighting - 0.25m offset to rear of footpath to follow property boundary line.
  – positioned asymmetrically on rear of footways at proximity to property access paths.
  – wall-mounted wherever possible.
- Tree pit
  – positioned behind tactile paving from mouth of junction to allow clear pedestrian movement.
  – tree surround positioned to front of footway with clear pedestrian width of 1.5m minimum
- Parking bays
  – width 2.5m where possible. Where this is impossible, cars can occupy part of the carriageway as long as minimum carriageway width requirements are met.

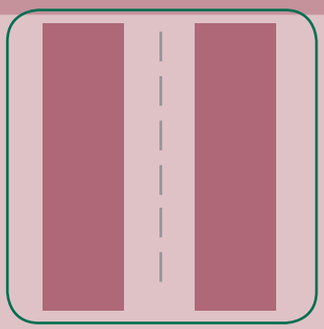
Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G4 Surface water drainage gully. Channel laid in stretcher course in staffordshire blue and brindle brick
- G5 Staffordshire blue tonal contrast tactile brick paving
- G7 Paving inset inspection covers to match adjacent surfacing
- G10 Conservation granite kerbs
- G11 Staffordshire blue bullnosed kerbs

(Kerb type selected according to area of use)

- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- G25 Tree surround
- F60 Traffic signs
- F64 Street name plates (wall-mounted where possible)
- L1 General highway lighting (preferably wall-mounted where possible)
- LA_ Tree type varies (see product sheets)





streets

ST3 Street

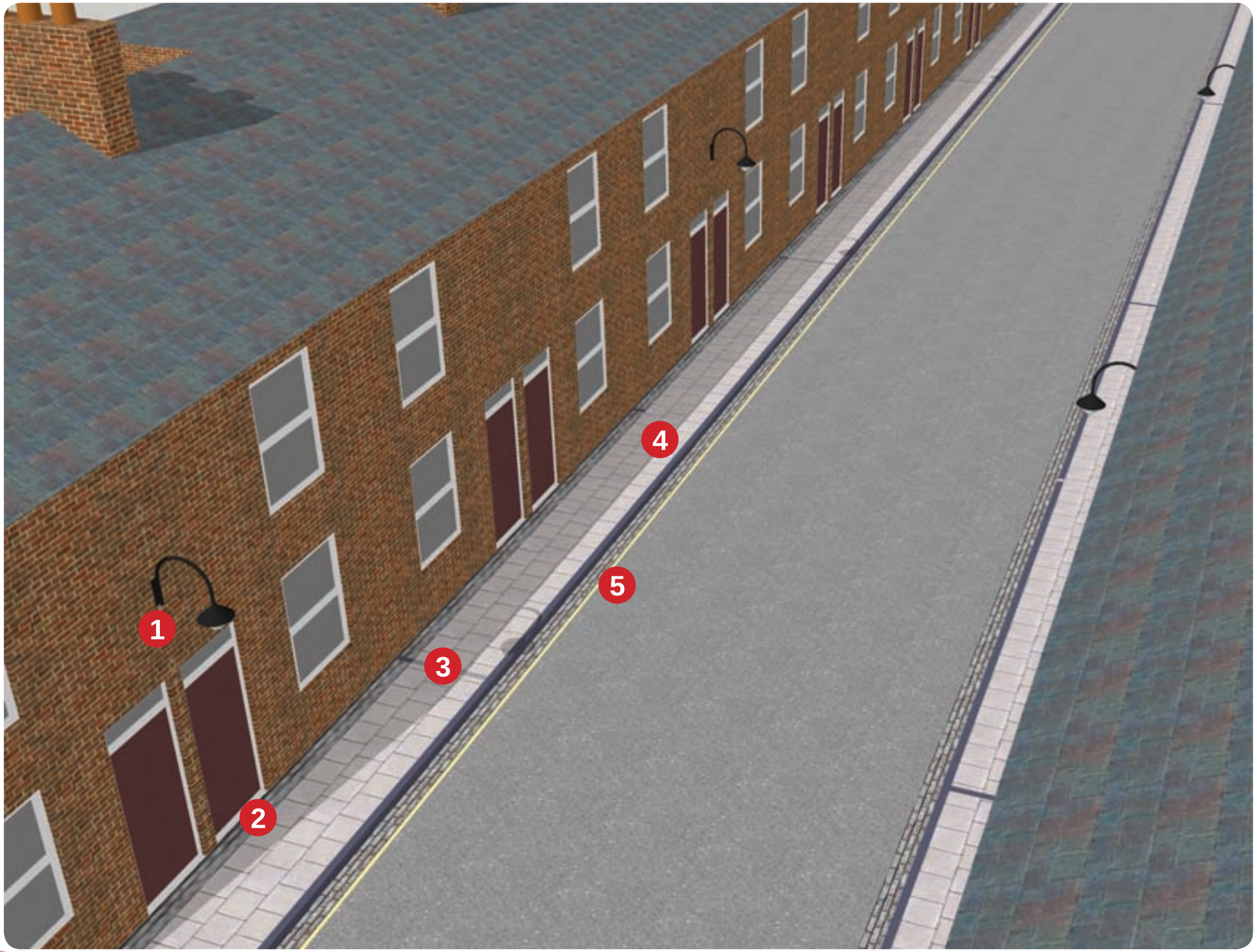
ST3A	Typical High Street
ST3B	Typical Fine Grain Victorian Street (1850-1900)
ST3C	Typical Coarse Grain Later Street (1900-1920)
ST3D	Typical Backway/Cycleway

ST4 All Areas - Pedestrian/Car Parking shared surface

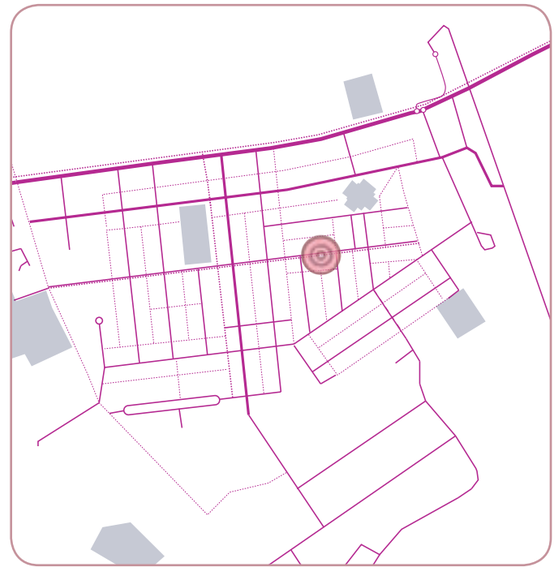
Fine Grain Victorian Street

The Main Features

1. Lighting and signage wall-mounted where possible to reduce street clutter.
2. Private/Public space buffer strip.
3. Footpath drainage channels.
4. Existing bullnosed kerbs retained or reinstated.
5. Coursed drainage channels retained or reinstated.



Details shown serve to echo the traditional Victorian character and street format of Wolverton. The ground surfaces, street furniture and lighting are selected to reference the historical features of the town, whilst providing a streetscape that is functional and suitable for modern living. Streets should be uncluttered and easily accessible for all users.



Fine Grain Victorian Street

Setting out Principles

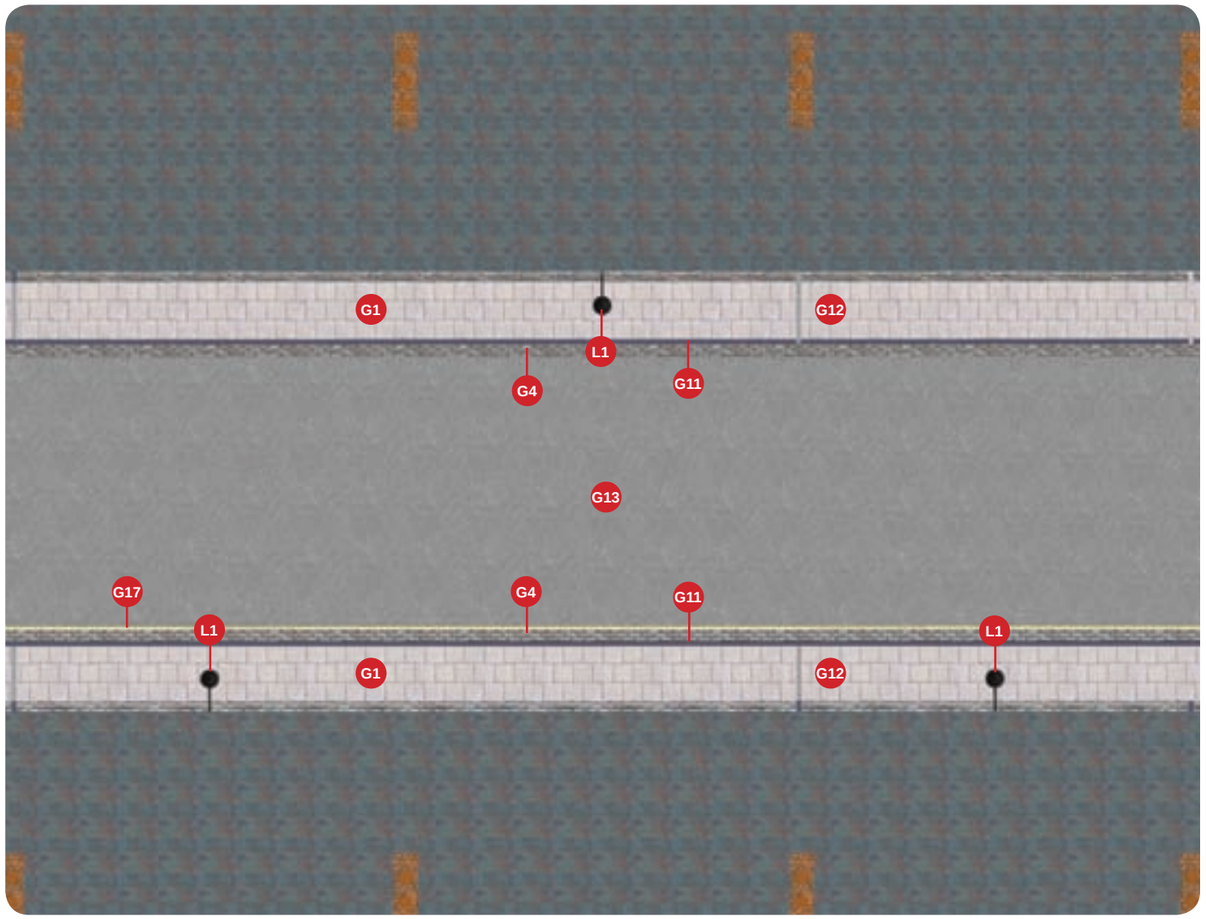
- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – 1.5m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Lighting
  – 0.25m offset to rear of footpath to follow property boundary line.
  – positioned asymmetrically on rear of footways at proximity to property access.
  – wall-mounted wherever possible.
- Paving inset drainage channels
  – positioned symmetrically along the footpath after every 2 plots.

Public Realm Elements

- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick.
- G5 Staffordshire blue tonal contrast tactile paving.
- G7 Paving inset inspection covers to match adjacent surfacing
- G11 Staffordshire blue bullnosed kerbs
- G12 Paving inset drainage channels
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings

- F60 Traffic signs
- F64 Street name plates

- L1 General highway lighting

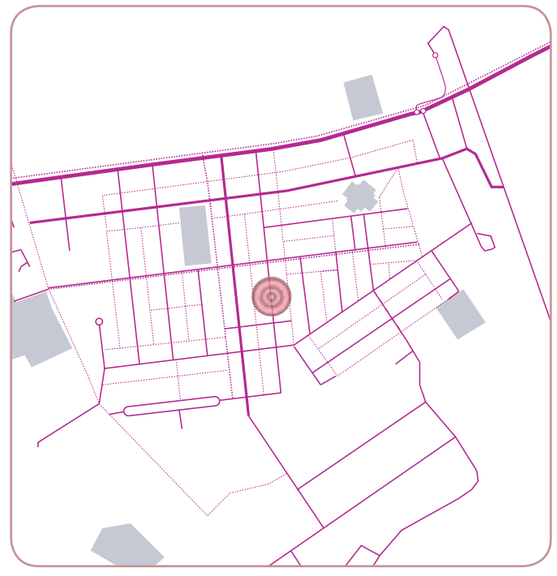


Coarse Grain Later Street

The Main Features

1. Lighting and signage wall-mounted where possible to reduce street clutter.
2. Private garden space buffer.
3. Existing kerbs retained or replaced with granite.
4. Coursed drainage channels retained or reinstated.

Details shown serve to echo the traditional Victorian character and street format of Wolverton. The ground surfaces, street furniture and lighting are selected to reference the historical features of the town, whilst providing a streetscape that is functional and suitable for modern living. Streets should be uncluttered and easily accessible for all users.



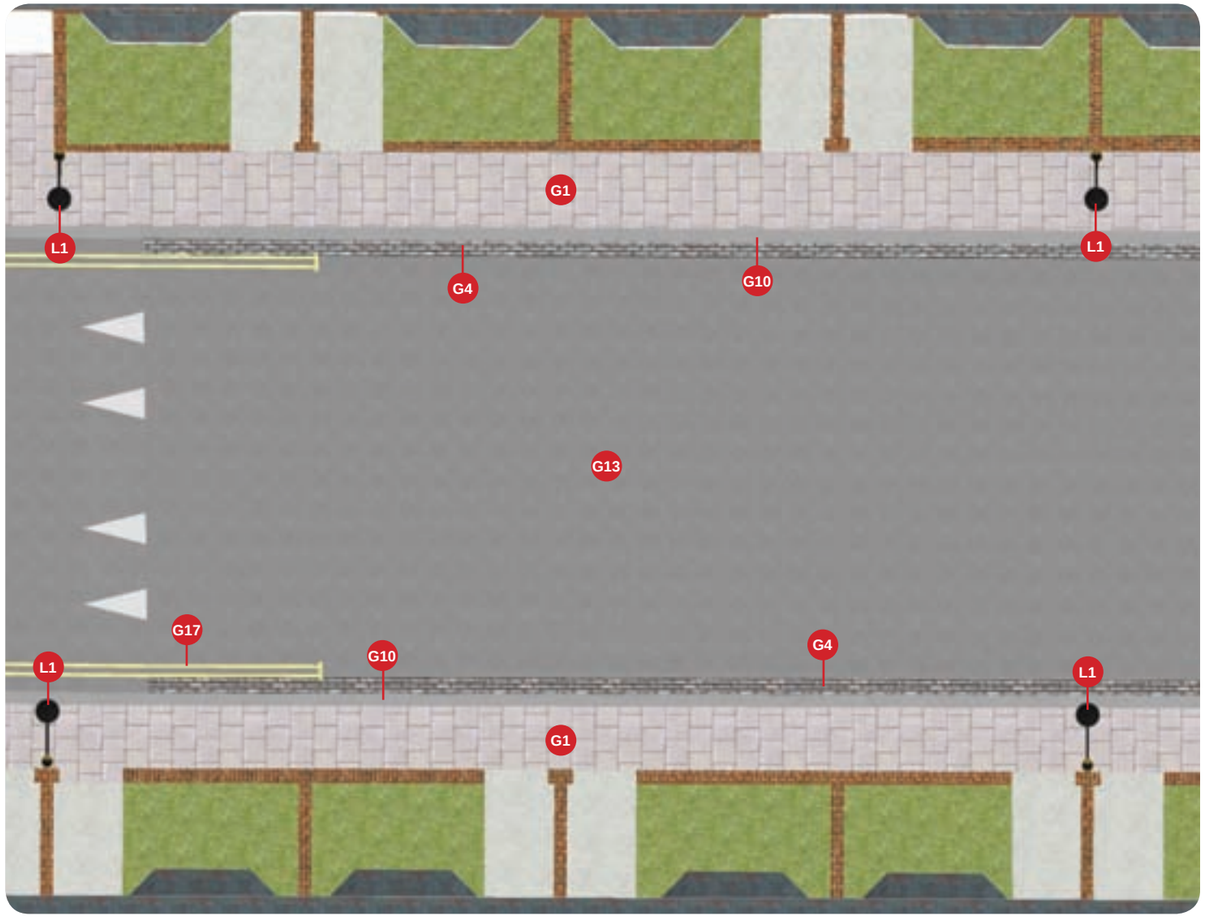
Coarse Grain Later Street

Setting out Principles

- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m
- Kerb radii
  – 1.5m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Lighting
  – 0.25m offset to rear of footpath to follow property boundary line.
  – positioned asymmetrically on rear of footways at proximity to property access paths.
  – wall-mounted wherever possible.
- Road markings
  – double yellow lines to extend 10m back from junction.

Public Realm Elements

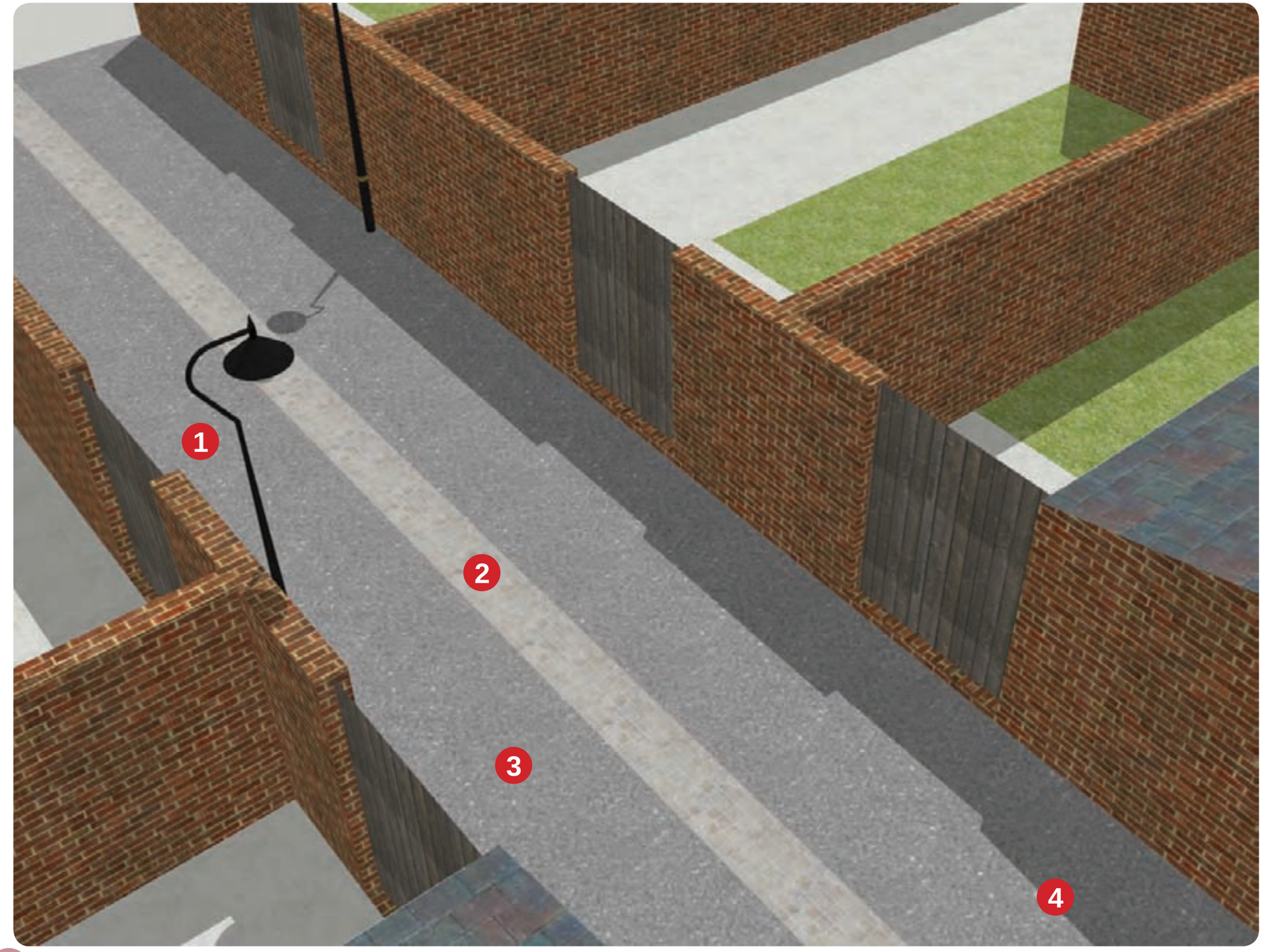
- G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond
- G4 Surface water drainage gully. Channel laid in stretcher course in Staffordshire blue and brindle brick
- G5 Staffordshire blue tonal contrast tactile paving.
- G7 Paving inset inspection covers to match adjacent surfacing
- G10 Granite conservation kerbs
- G13 Black matrix hot-rolled asphalt
- G17 Conservation primrose yellow durable paint carriageway markings
- F60 Traffic signs
- F64 Street name plates
- L1 General highway lighting



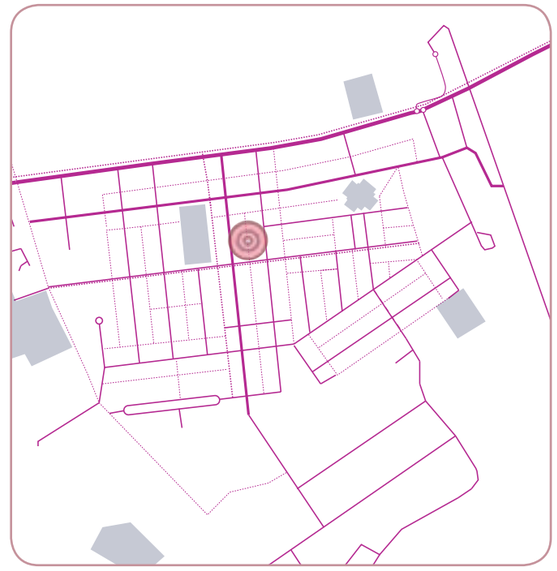
Typical Backway/Cycleway

The Main Features

1. Pedestrian scale lighting set to rear of footway for clear movement of pedestrians and cyclists.
2. Historical setted drainage channels retained or reinstated.
3. Cycle lane introduced.
4. No bollards at entrance to backway to provide vehicular access to private properties.



Details shown serve to echo the traditional Victorian character and backway formats of Wolverton. Whilst retaining historical features of the backway, a cycle lane has been introduced to improve route definition for cyclists and pedestrians. Backways should be uncluttered and easily accessible for all users, with a lighting strategy that makes them safe places to be.



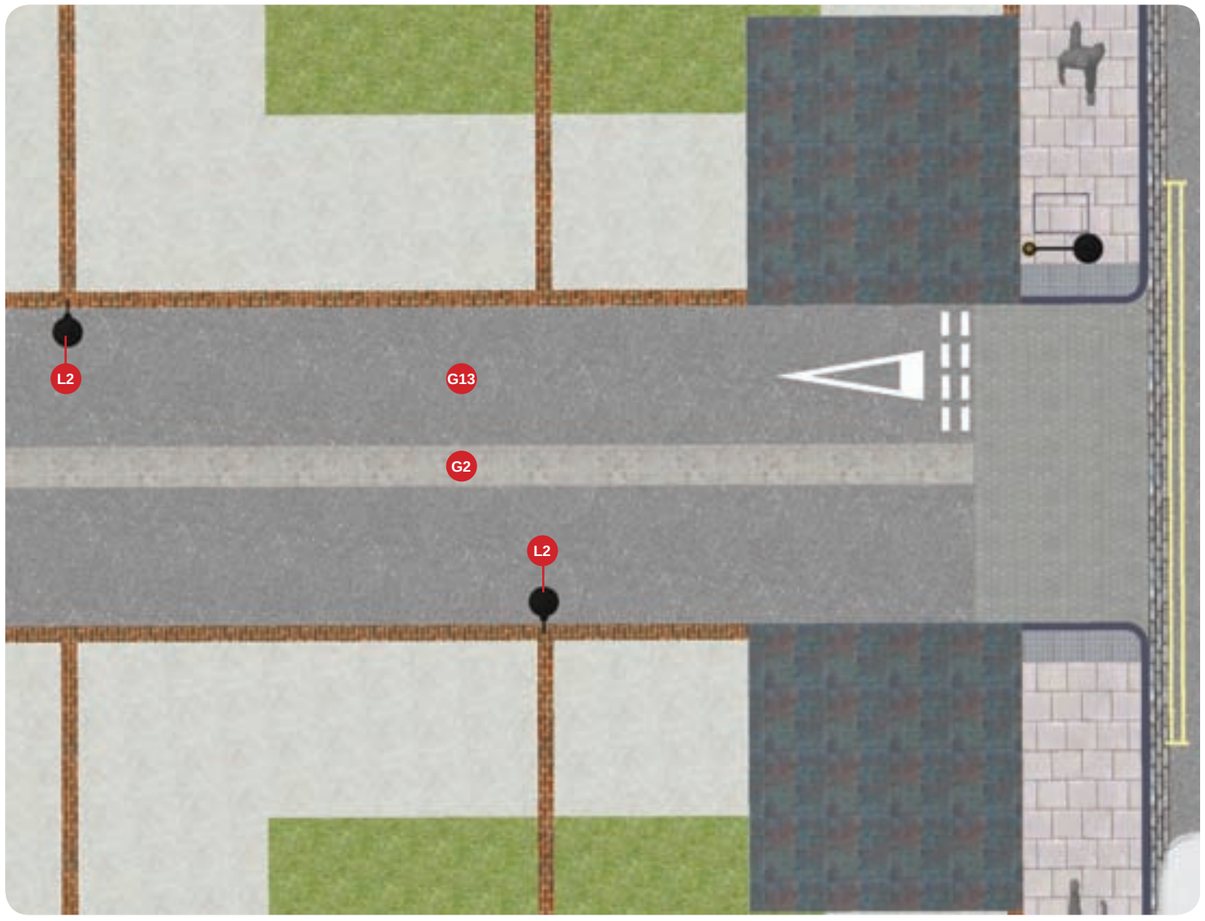
Typical Backway/Cycleway

Setting out Principles

- Backway Lighting
  – 0.25m offset to edges of backway.
  – positioned asymmetrically at edges of backway at proximity to garden access.
  – wall-mounted wherever possible.
- Kerb radii
  – __m to promote slow motor-vehicle speeds.
- Uncontrolled pedestrian crossings
  – set out in line of footway.
  – concrete sett crossing half-raised with semi-dropped kerb at backway.
  – ramps from carriageway to new level.
- Tactile paving
  – to comply with 'Guidance on the use of tactile paving surfaces' DETR 1998.
- Road signs
  – attached to building where possible.
  – back to back when post mounted.
- Road markings
  – double yellow lines extend 0.5m past mouth of backway.

Public Realm Elements

- G2 Conservation granite setts 100 x 100 stagger bond
- G7 Paving inset inspection covers to match adjacent surfacing
- G13 Black matrix hot-rolled asphalt
- L2 Footway lighting

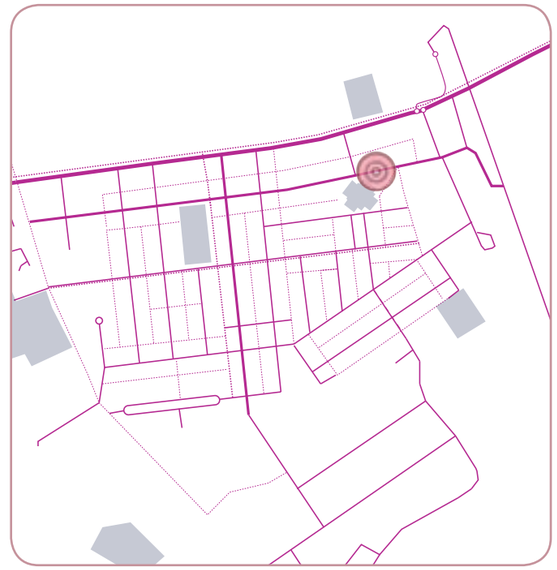


Pedestrian/ Car Parking shared surface

The Main Features

1. Kerb lowered to facilitate vehicular access.
2. Level surface for shared use with pedestrians.
3. Visual contrast in material to indicate parking bays when in use.
4. Sense of road narrowing created .
5. Existing kerb alignment unchanged.
6. Retention and reinstatement of historical features alongside new features.

This layout aims to provide parking in the Wolverton street scene without robbing the pedestrian of usable space. By raising the level of the parking bays to meet the footways around them, a surface is created that can be used by pedestrians in the absence of vehicles, and also narrows the road, slowing vehicle speeds and increasing driver awareness towards pedestrian presence.



Pedestrian/ Car Parking shared surface

Setting out Principles

- Footway
  – widths (from back of footway to front of kerb) are: 1.5m - 3m.
- Road signs
  – attached to building where possible
  – back to back when post mounted.
- Lighting - 0.25m offset to rear of footpath to follow property boundary line.
  – positioned asymmetrically on rear of footways at proximity to property access paths.
  – wall-mounted wherever possible.
- Parking bays
  – width 2.5m where possible as long as the minimum pedestrian clear zone is allowed.

Public Realm Elements

G1 Silver grey pre-cast concrete paving flags 400 x 400 stagger bond

G4 Surface water drainage gully. Channel laid in stretcher course in staffordshire blue and brindle brick

G10 Conservation granite kerbs

G11 Staffordshire blue bullnosed kerbs

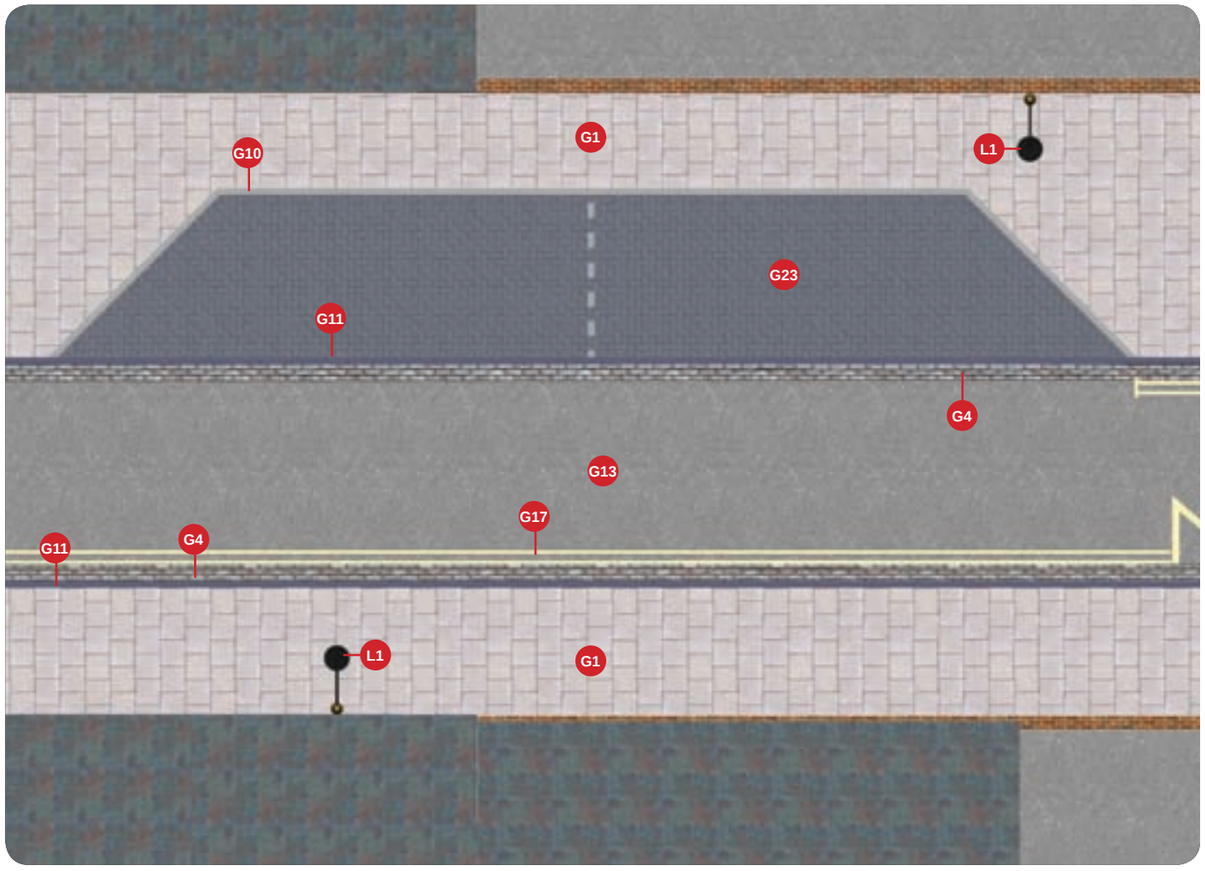
(Kerb type selected according to area of use)

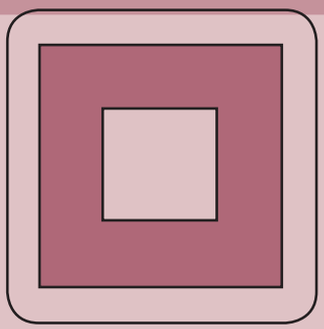
G13 Black matrix hot-rolled asphalt

G17 Conservation primrose yellow durable paint carriageway markings

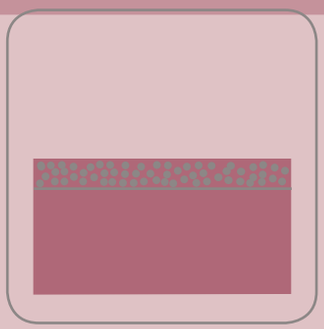
G23 Parking Bays

L1 General highway lighting (preferably wall-mounted where possible)





places



ground surfaces

Product sheets

Issue no.1 August 2012

G1 PRE-CAST CONCRETE PAVING FLAGS

Role, Use and Position

- Footway paving used on 'Public Highways' and within the curtilage of 'Private Developments'.
- Within developments and general amenity areas open for public access at grade.
- Course to be laid perpendicular to flow of pedestrians.

Example product

Material/finish

- Conservation/Saxon paving.
- Pre-Cast Concrete.
- Textured Finish.
- Clear antislip finish/coating on sloping paving

Colours

- Silver Grey.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- 'Stagger' bond.
- Consistent joint alignments.
- No unsightly mortar infills.

Dimensions

- 400 x 400mm x 60 mm minimum.
- Where additional strength is required due to occasional vehicular loads, flags should be specified with the appropriate increased depth.

Additional Comments

- Footway surfacing has a significant impact on the streetscape. Design teams should ensure that the visual simplicity of the footway is maintained, this includes using tonal contrast tactile blister and hazard warning paving.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby,
Huddersfield
HD2 2YA
Tel: 0845 302 0600

Charcon
Hulland Ward
Ashbourne
Derbyshire
DE6 3ET
Tel: 01335 372338

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G1 PRE-CAST CONCRETE PAVING FLAGS

G2 CONSERVATION GRANITE COBBLED SETTS

Role, Use and Position

- Backway drainage channels.

Example product

Material/finish

- Granite aggregate setts.

Colours

- Silver Grey.

Installation

- Bond Pattern laid on a rigid bed with mortar pointed joints
- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".

Dimensions

- 100mm x 100mm diameter x 100mm deep.

Additional Comments

- Existing historical setts should be retained wherever possible, especially within the area defined as 'town centre' in this guide.
- Where it is deemed that not enough existing conservation setts remain on a given strip of backway to retain the desired visual impact and functional values to the public realm, it is proposed that they are replaced with a modern equivalent. However, any granite setts must be reused elswhere within Wolverton with the town centre taking priority.

Available from

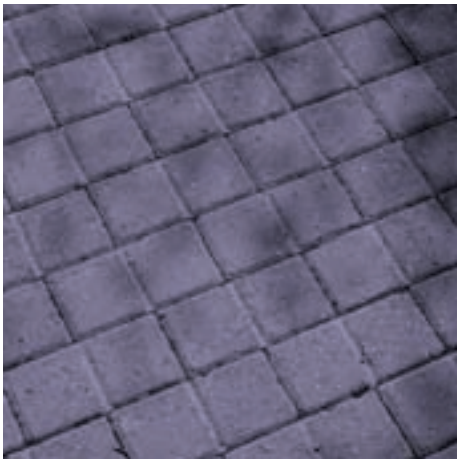
Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G2 CONSERVATION GRANITE COBBLED SETTS

G3 CONCRETE SETTS

Role, Use and Position

- Blocks are used as a pedestrian/vehicle surface at backway crossing points.



Example product

Material/finish

- High quality exposed aggregate finish, V-Groove Key Block by Marshalls would be an appropriate example.
- Pre-cast concrete chamfered edge.

Colours

- Grey Natural / Staffordshire blue

Installation

- For edge restraints and installation refer to with Milton Keynes Council's "Specification for Highway & Construction works".
- Herringbone bond, set at 45 degrees to the carriageway .

Dimensions

- 200 x 100 x 80mm.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby,
Huddersfield
HD2 2YA
Tel: 0845 302 0600

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G3 CONCRETE SETTS

G4 KERBSIDE DRAINAGE CHANNELS

Role, Use and Position

- Kerbside drainage channels along streets.

Example product

Material/finish

- Block paving laid in Stretcher Course.

Colours

- Staffordshire blue and brindle finish.

Installation

- Laid in Stretcher Course in such a manner as to create a gully channel.
- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".

Dimensions

- 215 mm x 65mm 100 mm diameter nominal

Available from

Ketley Brick Company Ltd
Dreadnought Works, Pensnett,
Brierley Hill, West Midlands, DY5
4TH, UK.
Tel: 01384 78361
Fax: 01384 74553
Email: info@ketley-brick.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G4 KERBSIDE DRAINAGE CHANNELS

G5 BLISTER PAVING

Role, Use and Position

(To comply with 'Guidance on the use of tactile paving surfaces' DETR 1998)

- Referred to as tactile paving.
- Blister paving is used to provide a warning to people with visual impairment of crossing facilities.

Example staffordshire blue brick product

Material/finish

- Staffordshire blue.

Colours

- Tonal contrast finish adjacent to silver grey footway paving.
- Staffordshire blue brick adjacent to silver grey paving flags

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Specification and application to conform to the current guidelines. Units must align with direction of crossing.
- Three rows shall be provided at crossing points laid to 1:10 falls.

Dimensions

- 400 x 400 x 65mm.
- A blister height below 4.5mm reduces effectiveness and becomes undetectable for the visually impaired.

Additional Comments

- A balance has to be struck between the needs of people having visual impairments and other users and the character of Wolverton. There must however be sufficient tonal contrast between the footway paving and the blister paving to aid the visually impaired.

Available from

Ketley Brick Company Ltd
Dreadnought Works, Pensnett,
Brierley Hill, West Midlands, DY5 4TH, UK.
Tel: 01384 78361
Fax: 01384 74553
Email: info@ketley-brick.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G5 BLISTER PAVING

G6 HAZARD WARNING PAVING

Role, Use and Position

(To comply with 'Guidance on the use of tactile paving surfaces' DETR 1998)

- Hazard warning paving can also be referred to as 'corduroy paving' as horizontal raised strips warn pedestrians of potential hazards.
- Provide a warning to people with visual impairment of cycleways, or changes of level including top and bottom of steps.
- Hazard warning paving may also be used to provide warning for other obstacles such as building overhangs or reduced overhead clearance heights.
- Must be positioned at right angles to direction of walking

Example product

Material/finish

- Pre-cast concrete.

Colours

- Tonal contrast finish adjacent to silver grey footway paving.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Specification and application to conform to the current guidelines. Units must align with direction of crossing.

Dimensions

- 400 x 400 x 65mm.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Charcon
Hulland ward
Ashbourne, Derbyshire
DE6 3ET
Tel: 01335 372338

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G6 HAZARD WARNING PAVING

G7 INSPECTION COVERS

Role, Use and Position

- Service covers act as access points to either utility apparatus or drainage systems for maintenance. They are found in footways, carriageways and underpasses within 'Public Highways' and 'Private Developments'.
- Recess allows adjacent paving to be laid incover giving seamless paving within public realm.

Example product

Material/finish

- Galvanised Steel.

Colours

- Finished appearance to match adjacent surfacing.
- The use of a stainless steel 'marker' inset into the surface will denote utility.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Paving trays to be installed over the existing chamber to allow the new surface to be 'cut in' to match.
- Trays to be laid parallel to direction of surrounding paving.
- Paving to be laid in same direction as adjacent paving.

Additional Comments

- Tactile paving should be kept away or to a minimum near service covers, when possible.

Available from

Peter Savage
Sales office: Liberty House,
Liberty Business Park, Attleborough,
Nuneaton, Warks, CV11 6RZ
Tel: 02476 641 777

Steelway Brickhouse
Tel: 01215 214 500
Fax: 01215 214 551
Website: www.steelway.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G7 INSPECTION COVERS

G10 GRANITE CONSERVATION KERBS

Role, Use and Position

- Throughout Wolverton outside designated conservation area.

Example product

Material/finish

- Natural granite to BS435 dressing B fair picked.

Colours

- Silver grey.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Channels to be laid flush with minimum 150-300mm deep Class ST4 concrete bedding and haunching, to resist lateral movement.
- Kerb alignment to be consistent and follow smooth lines to provide strong definition between footway and carriageway.
- Upstand 100mm to kerbs.
- Radius kerbs to be used, not straight cut.

Dimensions

- 255 x 205mm.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby,
Huddersfield
HD2 2YA
Tel: 0845 302 0600

Charcon
Hulland ward
Ashbourne
Derbyshire
DE6 3ET
Tel: 01335 372338

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G10 GRANITE CONSERVATION KERBS

G11 BLUE BULLNOSED KERBS

Role, Use and Position

- Throughout Wolverton Conservation (area 1).

Example original product

Material/finish

- Staffordshire Blue single bullnosed engineering brick.

Colours

- Staffordshire Blue.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Kerb alignment to be consistent and follow smooth lines to provide strong definition between footway and carriageway.
- Upstand 100mm to kerbs.

Dimensions

- 215 x 102 x 65
- Bullnose radius 51mm

Available from

Ketley Brick Company Ltd
Dreadnought Works, Pensnett,
Brierley Hill, West Midlands, DY5
4TH, UK.
Tel: 01384 78361
Fax: 01384 74553
Email: info@ketley-brick.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G11 BLUE BULLNOSED KERBS

G12 DRAINAGE CHANNELS

Role, Use and Position

- Drainage channels, from property downpipes to roadside drainage channel.

Material/finish

- Cast iron.
- Blue engineering Block channel.

Colours

- Staffordshire blue.

Example original product

Alternative replacement product

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".

Dimensions

- 50 x 50mm .

Additional Comments

- The original cast iron drainage channels that can be found across Wolverton are an important historic component of the street scene especially the conservation area.

Alternative replacement product

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Ketley Brick Company Ltd
Dreadnought Works, Pensnett,
Brierley Hill, West Midlands, DY5
4TH, UK.
Tel: 01384 78361
Fax: 01384 74553
Email: info@ketley-brick.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G12 DRAINAGE CHANNELS

G12A GULLEY FRAMES & COVERS

Role, Use and Position

- To aid drainage of carriageway.
- Positioned adjacent to the kerbline but within the channel.
- Exact position to be determined by design

Example product: Type A

Material/finish

- Cast iron with natural finish

Colours

- Natural metallic

Installation

- Installation in accordance with Milton Keynes Council's "Specification for Highway & Construction Works".

Dimensions

- Type A - 450 x 450 x 100mm

Available from

Manhole Covers Ltd,
Little London Business Park,
Wendover, Bucks.
Tel: 01296 696 575

Peter Savage Ltd,
Head Office, Nuneaton, Warks.
Tel: 02476 641 777

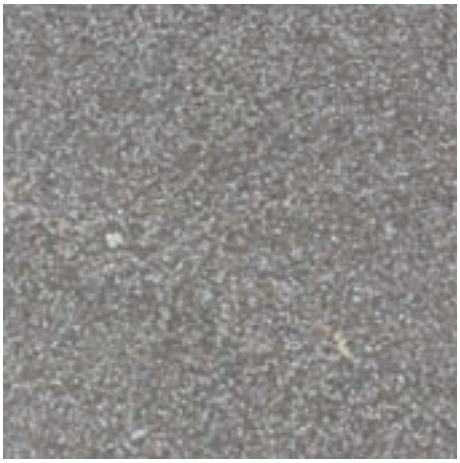
Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G12A GULLEY FRAMES & COVERS

G13 HOT-ROLLED ASPHALT

Role, Use and Position

- Carriageway surface finish used on all streets and bellmouth interfaces within the designation of the 'Public Highway'.
- This type of surfacing is also suitable for access roads into private developments and loading areas.



Example product

Material/finish

- Hot-Rolled Asphalt Surfacing with pre-coated Chipping rolled in. The finished surface shall have a minimum texture depth of 1.2cm.

Colours

- Black matrix with flecks (colour to be determined).

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Specification shall be the current Department for Transport Specification for Highway Works.
- All materials shall be manufactured and supplied in accordance with requirements of: BS594: Part1 2005 and Part 2: 2003.

Maintenance

- Preferred method where repairs are to be carried out is to use infra-red heating process techniques. This technique involves re-heating the existing surface and recycling the material in situ. This will ensure a seamless repair and eliminates any joint failures.

Dimensions

- 35-40mm Hot-rolled Asphalt.
- 10mm Pre-coated Chipping.

Additional Comments

- Milton Keynes Council promotes recycling and where possible Contractors should endeavour to re-use cold planed bituminous arisings.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

Available from

Hot Rolled Asphalt
Surfacing Contractor / material as agreed by Milton Keynes Council Highways Engineer.

Hansonlite pre-coated Chipping
Hanson Aggregates, Shepshed
Tel : 01509 503161

G13 HOT-ROLLED ASPHALT

G17 ROAD MARKINGS

Role, Use and Position

- Markings are applied to the carriageway to control, warn and guide the road user.
- Road markings do not confer a duty of care to individuals beyond the general public duty of the Highway Authority under Section 39 of the 1988 Road Traffic Act.

Example product

Material/finish

- Pre-formed thermoplastic strip or reflectorised finishes to paint should be used.

Colours

- Colours shall be as specified under the current Traffic Signs Regulations and General Direction [the Regulations] or relevant Guidance.
- Yellow lines within the conservation area should be in conservation primrose yellow.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- The standard width for all yellow lines shall be 50mm, except where prohibited by the Regulations. This is appropriate for design speeds of up to 30mph. Thicker lines can be used with permission where there are adhesion problems.
- The standard width for all other lines shall be the minimum specified in the Regulations.
- The usual size for all wording shall be the minimum specified in the Regulations.
- Markings shall be laid in sympathy with any underlying paving materials.
- Where markings are to be removed, 'ghost images' shall be avoided. Mechanical techniques such as sand-blasting are recommended to avoid damaging the road surface.
- Where markings are to be re-marked, the new paint shall be accurately applied over the old material.

Available from

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G17 ROAD MARKINGS

Additional Comments

- Increasingly, coloured surfacing and road markings are being introduced. The use of colour is only advisory and their impact on the townscape should carefully be taken into consideration before any application. The townscape of Wolverton does not benefit visually from the addition of coloured surfacing/markings.

G18 ACCESS KERBS

Role, Use and Position

- Located at bus stops to facilitate level boarding for the public, particularly people with pushchairs and wheelchairs.
- Marker bump assists the bus to align parallel and close to the kerb.

Example product

Material/finish

- Granite.

Colours

- Silver grey.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Kerbs shall be laid with 150mm deep class ST4 concrete bedding and haunching.
- Kerb face 220mm for 3m boarding length with transition kerbs laid either side.

Available from

Charcon
Hulland Ward
Ashbourne
Derbyshire
DE6 3ET
Tel: 01335 372338

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G18 ACCESS KERBS

G21 RAISED TABLES

Role, Use and Position

- The two main objectives of raised tables are to make crossing points universally accessible to ease pedestrian movements and to slow vehicle speeds.
- Side road entry treatments have another function - to denote a change in character between a main street and a minor street.

Example product - Stretcher bond

Material/finish

- Ramps: blocks laid to herring bone bond to match those used elsewhere . Could be Stretcher bond if bonded down with Ronoset.
- Table tops: hot rolled asphalt to match that used elsewhere
- Kerbs: granite or staffordshire blue to match those used elsewhere.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- The minimum gradient of approach ramps shall be 1:20.
- The minimum height of ramps shall be 75mm.
- The length of the raised area shall be sufficient to avoid grounding of vehicles, with a minimum length of 3m.
- Delineating kerbs shall be laid flush on the leading edges of the ramp, and flush with the top of the ramps.
- Any setts, blocks or kerbs shall usually be bedded in 200mm of concrete (Class ST4), with one layer of steel mesh reinforcement, as necessary.
- Drainage shall be moved or provided, as required in order to drain around a raised table.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G21 RAISED TABLES

G23 PARKING BAYS

Role, Use and Position

- Parking bays in Wolverton are generally parallel to the kerb.
- Parking bays shall be suitable to be used for deliveries of a small scale, disabled drivers and other drivers.

Example parallel parking bay

Material/finish

- Blue engineering paver laid to herringbone in Parking bays marked with road markings or colour top marker blocks.

Installation

- Generally, all herringbone paving block to be laid in rows perpendicular to the flow of traffic.
- Parallel parking bays to be laid in herringbone perpendicular to kerb.
- Any blocks or kerbs shall usually be bedded in 200mm of concrete (Class ST40) with one layer of steel mesh reinforcement as necessary.
- Drainage shall be moved or provided as necessary with a minimum of 30cm block width drainage channel running along the curbline, and layed in stretcher course.

Additional Comments

Available from

Ketley Brick Company Ltd
Dreadnought Works, Pensnett,
Brierley Hill, West Midlands, DY5 4TH, UK.
Tel: 01384 78361.
Fax: 01384 74553
Email: info@ketley-brick.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G23 PARKING BAYS

G24 STEPS AND RAMPS

STEPS

Role, Use and Position

- Steps are used where there are changes in level over a relatively short distance.
- Changes in level over 150mm should have a step with all the requisite landings, handrails and hazard warning paving (G6).

Material/finish

- Pre-cast concrete risers and treads with anti-slip inserts.
- Reinforced in-situ concrete bases.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- To MKC guidelines and Building Regulations 2000 Part M.
- Rise between 150-170mm.
- Tread between 300-450mm.
- Minimum width 1200mm.

Example product

RAMPS

Role, Use and Position

- Ramps are beneficial to wheelchair users, people pushing prams, pushchairs and bicycles.
- As a general guide, ramps should be provided adjacent to stepped access where practicable.

Material/finish

- Pre-cast concrete slabs as G1.

Installation

- To MKC guidelines and Building Regulations 2000 Part M.
- Gradients to be as shallow as possible. See table opposite.
- Wheelchair users need adequate space to stop on landings, to open and pass through doors without having to reverse into circulation routes or to face the risk of rolling back down slopes. Landings should be at least 1.5m long.

Going of a flight	Maximum gradients	Maximum rise
10m	1:20	500mm
5m	1:15	333mm
2m	1:12	166mm

Limits for Ramp Gradients

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Charcon,
Hulland Ward,
Ashbourne, Derbyshire
DE6 3ET
Tel: 01335 372338

G24 STEPS AND RAMPS

G25 TREE SURROUND

Role, Use and Position

- Promoting maximum usable footpath whilst reducing the potential for trip hazards.
- Promoting rainwater access to the tree roots.
- A robust element to reduce future maintenance liabilities.
- Tree planting positions to co-ordinate and integrate with the paving modules and patterns at 4.8m centres to accord with paving modules.

Example product

Material/finish

- Fabricated galvanised steel support with paving block infills.

Colours

- To match adjacent paving.

Installation

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".

Maintenance

- To manufacturers recommendations.

Dimensions

- 1200 x 1200mm.
- Bespoke dimensions for special circumstances.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

G25 TREE SURROUND

street furniture

Product sheets

Issue no.1 August 2012

F10 FIXED BOLLARDS

Role and use

- Used to restrict vehicle movement on pedestrian areas such as footways and parks.
- Bollards should only be used where there is no alternative means of keeping vehicles from the footway.
- Bollards can also be used to create articulation and definition to the streetscape.

Example product

Positioning

- Located outside of clear pedestrian zone.
- Spacing to allow for the passage of wheelchairs, push chairs and pedestrians but restrict the passage of vehicles - a maximum spacing of 1.8m centres.
- Allow 450mm clear space from the front edge of the kerb.

Material/finish

- Engineering grade polyurethane cast around a steel core.
- Black two-part polyurethane coating and black paint finish.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- 900mm high.
- 300mm root depth.
- 110mm diameter.

Standards

- Bollards which have a security function must be fixed and specified in accordance with BSI Publicly Available Specification (PAS) 68 and 69.

Available from

Marshalls plc,
Birkby Grange
Birkby Hall Road
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F10 FIXED BOLLARDS

Additional Comments

- Consider opportunities for fixing signs and waymarks to bollards to avoid use of additional posts.
- The use of visibility bands may be required in areas of heavy pedestrian usage.
- If vehicles are required to mount the edge of the footway on rare occasions, design teams should consider local strengthening of the footway rather than introducing bollards.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F11 LOCKABLE BOLLARDS

Role and use

- Retractable lockable bollards are considered where intermittent vehicular access is required for emergency vehicles, servicing, delivery etc.

Example product

Positioning

- Bollards should be used sparingly therefore not to be used to prevent footway parking or damage occurring to footways.
- Located outside of clear pedestrian zone.
- Spacing to allow for the passage of wheelchairs, push chairs and pedestrians but restrict the passage of vehicles - a maximum spacing of 1.8m centres.
- Allow 450mm clear space from the front edge of the kerb.

Material/finish

- Cast iron bollards manufactured from ductile iron to to BS EN 1563 1997.
- Painted in black gloss RAL 9017
- Yellow Reflective band for increased visibility and safety required

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Include ASSA security padlock with standard key. Finish to match bollard.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- 1000mm high.
- 100mm diameter.

Available from

Marshalls plc,
Birkby Grange
Birkby Hall Road
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire, ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F11 LOCKABLE BOLLARDS

F12 REDWAY BOLLARDS

Role and use

- To mark Redway Routes within Wolverton.

Example product

Positioning

- To be positioned at junctions and other hazard points, where Redways cross carriageways or access roads.
- Spacing between bollards should not exceed 1.8m centres, but should allow the passage of cycles, wheelchairs, pushchairs and pedestrians.
- To be set back from the kerb a dimension that places them at the back of the inter-visibility envelope of cyclist and vehicle. This dimension shall not be greater than 3.0m. Where the visibility distance is 2.5m then they should be set 2.5m behind the kerb.
- In certain circumstances arising from the particular geometry of the crossing and its relationship to adjacent footpaths, the bollards may be brought forward and set at 1.9m behind the kerb.

Material/finish

- Galvanized mild steel bollard.
- Bollards to be galvanized tube with aluminium alloy cap prepared and finished in Stove Bonded Powder coated gloss finish Syntha Pulvin 12489.
- To be comprised of recycled material

Example product

Colours

- Yellow

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- 950mm high above ground.
- 114mm diameter.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

F12 REDWAY BOLLARDS

F20 FREESTANDING LITTER BINS

Role and Use

- The provision of litter bins is purely functional but can have a considerable impact on the appearance of the street or location. It is therefore not considered appropriate that one single style can be used in all environments, but there should be a restricted range.
- Freestanding bins may be used where the use of column mounted bins, is not practical.

Example product

Positioning

- Litter bins should be provided in various "hot spots" particularly in parks, near seats and fast food outlets.
- Must be located at the front of the footway outside the pedestrian "clear zone" and should be aligned with other street furniture items such as bollards, guardrail and lamp columns. Positioning at the edge of the footway will aid emptying into collection vehicles.

Material/finish

- Cast in Ductile Iron and painted in black .
- Galvanized steel polyester powder coated.
- RAL 9017 plastic.
- Anti-graffiti coating.
- All bins to be fire- proof, provided with a 20mm ballast base and galvanized steel liner as standard.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Height 800-1200mm.
- Width 410-780mm.
- Capacity 90 litres.

Available from

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire
ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F20 FREESTANDING LITTER BINS

Additional comments

- Three options (cast iron, polyester powder coated galvanized steel and plastic) are available and should be selected with due consideration to the location, management and maintenance issues and predicted footfall.

F21 COLUMN-MOUNTED LITTER BINS

Role and Use

- The use of column-mounted bins aids in the reduction of street furniture clutter by integrating the bin with other street furniture elements.

Example product

Positioning

- Integrated with lamp columns, or other existing street columns.

Material/finish

- Galvanized steel polyester powder coated RAL7030.
- Anti-graffiti coating.
- All bins to be fire-proof and fitted with a galvanized steel liner as standard.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Fitted in accordance with manufacturer's instructions.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Height 580/880mm.
- Width 310mm.
- Depth 310mm.
- Capacity 40/60 litres.

Additional Comments

- Column mounted bins may require tactile pavers to reduce the incidence of collision by people with visual impairment who use a cane for navigation.
- Consideration should be given to the selection of litter bins in particular areas of Wolverton. Three options (stainless steel, polyester powder coated, galvanized steel and plastic) are available and should be selected with due consideration to the location, management and maintenance issues and predicted footfall.

Available from

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire, ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F21 COLUMN-MOUNTED LITTER BINS

F22 RECYCLING BIN

Role and Use

- Increasing desire within the community and requirements within local and central government to recycle waste makes the adoption of recycling bins in Milton Keynes appropriate.
- Bins should have a descriptive sign stating which materials are allowed to be deposited within them.

Example product

Positioning

- Bins need to be positioned so as to not interfere with pedestrian movement. Recycling bins need to be positioned sensitively where they are visible but minimizing adverse visual impact.
- Recycling facilities should be located at the rear of the footway.
- All bins should be located outside the pedestrian “clear zone”.
- In building recesses.
- Off major pedestrian thoroughfares.
- In specially constructed enclosures.
- In multi-storey and other parking areas.

Material/finish

- Galvanized steel polyester powder coated in black.
- Anti-graffiti coating.
- All bins to be fire-proof, provided with a 20mm ballast base and galvanized steel liner as standard.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council’s “Specification for Highway & Construction works”.
- Fitted in accordance with manufacturer’s instructions.
- Maintained in accordance with manufacturer’s instructions.

Dimensions

- Height 1015mm.
- Width 770mm.
- Depth 420mm.
- Capacity 160 litres.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the ‘Engineer’ to ensure full compliance with Wolverton Handbook requirements.

Available from

Broxap Ltd
Rowhurst industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire
ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

F22 RECYCLING BIN

- Also available as a single, treble or quadruple unit, according to use.

Additional Comments

- Consideration should be given to the selection of litter bins in particular areas of Wolverton. Options available should be selected with due consideration to the location, management and maintenance issues and predicted footfall.

F30 BENCHES

Role and Use

- Seats with back rests are to be located where longer periods of rest are required, eg. bus stops, parks or similar areas where people are encouraged to linger longer in the public realm.

Positioning

- In key 'dwell' and 'waiting' areas.
- On key pedestrian routes.
- Typically seats will be positioned within the street furniture zone along the street.
- Seating should be located where it does not cause an obstruction.
- Seats will be located at known points of demand – primarily within activity areas such as squares to prevent cluttering of the footway and away from the effects of traffic.
- Problems of antisocial behaviour and rough sleeping should be considered when determining location.
- Avoid very isolated seating, or seating where there is a poor view of those approaching.
- Consider the views – is there an interesting/attractive outlook?
- Provision should be made at regular spacing (ideally 50m) along recognized key pedestrian routes.
- At least 1.8m width should be left unobstructed around seating to allow for the movement of wheelchairs, prams, etc.

Material/finish

- Broxap BX2060-BP Lakeside - Black cast iron framed seat with wooden slats in well surveilled areas.
- Broxap BX2060-AV-BP Lakeside - Anti-vandal black cast iron framed seat with steel slats to prevent vandalism in less populated areas.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Concealed ground fixings should be used.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Length: 1800mm.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

Example product

Example product

Available from

Broxap Ltd
Rowhurst industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire
ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

F30 BENCHES

F40 CYCLE STANDS - UNCOVERED

Role and Use

- Used for the parking of cycles in the public realm.
- The provision of cycle stands in appropriate locations will discourage people chaining bicycles to railings and posts and other undesirable places.
- Cycle parking should be provided where there is a need and it can be practically fitted within the street.
- Covered cycle stands are used where there is space and demand for cycles to be protected from the environment.
- The type of stand proposed is largely standardised although distinctive designs on special public realm areas may be appropriate.
- Uncovered cycle stands should be used as a short term parking facility.

Example product

Positioning

- Cycle stands need to be carefully located and designed to minimise their visual impact, and the potential to create an obstruction in the footway.
- Cycle stands should be positioned adjacent to key destinations of known demand eg library, shops, transport interchanges, etc and will relate to other street furniture components.
- Sufficient space must be allowed to ensure that bicycles will not project into the pedestrian “clear zone”. Stands must be set back from main pedestrian thoroughfares.
- Locate in highly visible positions and grouped rather than in isolation.
- When cycle stands are grouped together, a minimum spacing of 1000mm should be provided between stands to allow access and 1200mm is preferred.
- Avoid obstructing pedestrian movement.
- Every cycle parking facility should be highly visible and well lit and clear of pedestrian/vehicle sight lines.
- Cycle stands should be positioned close to building entrances, or in locations that are convenient, safe and well visually surveyed.

Material/finish

- Galvanised polyester powder coated or natural stainless steel finish (Grade 316 preferred).
- Avoid paint finish due to maintenance implications.

Available from

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire, ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the ‘Engineer’ to ensure full compliance with Wolverton Handbook requirements.

F40 CYCLE STANDS - UNCOVERED

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specificatio for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Height 800mm.
- Length 750mm.
- Tube diameter 50mm.

Additional Comments

F41 CYCLE STANDS - COVERED

Role and Use

- Used for the parking of cycles in the public realm.
- Covered cycle stands are used where there is space and demand for cycles to be protected from the environment.
- The provision of cycle stands in appropriate locations will discourage people chaining bicycles to railings and posts and other undesirable places.
- The type of stand proposed is largely standardised although distinctive designs on special public realm areas may be appropriate.

Example product

Positioning

- Clear of the pedestrian movement zone.
- Cycle stands need to be carefully located and designed to minimise their visual impact, and the potential to create an obstruction in the footway.
- Cycle stands should be positioned adjacent to key destinations of known demand eg library, shops, transport interchanges, etc and will relate to other street furniture components.
- Sufficient space must be allowed to ensure that bicycles will not project into the pedestrian “clear zone”. Stands must be set back from main pedestrian thoroughfares.
- Avoid obstructing pedestrian movement.
- Every cycle parking facility should be highly visible and well lit and clear of pedestrian/vehicle sight lines.

Example product

Material/finish

- Stainless steel.
- Galvanized steel polyester powder coated in black.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council’s “Specification for Highway & Construction works”.
- Maintained in accordance with manufacturer’s instructions.

Dimensions

- Height 2500mm-3000mm.
- Width 3600-4800mm.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the ‘Engineer’ to ensure full compliance with Wolverton Handbook requirements.

Available from

Vekso Street Design Ltd
15 Hollingworth Court
Turkey Mill, Ashford Road
Maidstone, Kent
ME14 5PP
Tel: 01622 609 000
Fax: 01622 609 006
info@veksoe.com

Urban Engineering
Urban House, PO Box 321
Southport, PR8 5GE
Tel: 01704 540405
Fax: 01704 544 229
sales@urbanengineering.co.uk

F41 CYCLE STANDS - COVERED

F50 PEDESTRIAN GUARD RAIL

Role and Use

- Pedestrian guardrail provides a means of discouraging pedestrians from entering the busy carriageway and channelling them to a safer section of road where they can cross.
- Notwithstanding their prime safety functions, the effect of guardrails on the street scene can often be less than positive. Design teams should question the need for guardrail. Guardrail should not be used unless it can be shown to be needed to maintain pedestrian safety.
- The general principle is to reduce the need for guard railing and similar features as far as possible.

Example product

Positioning

- Wherever possible remove or reduce guard rails to a minimum.
- Set back 450mm from the roadside kerb face.
- Positioning of guard rails should consider the visibility of vulnerable pedestrians such as children.
- Guard rails should not be used as a deterrent to prevent footway parking or damage occurring to footways.
- Must be located in front of the footway outside the pedestrian “clear zone”.

Example product

Material/finish

- Posts are mild steel galvanised with Ferrocast polyurethane and polyester powder coating in black.
- Panels are mild steel hot dip galvanised and powder coated in black.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council’s “Specification for Highway & Construction works”.
- Uprights set in concrete bases.
- Maintained in accordance with manufacturer’s instructions.
- Where guardrail is damaged it should be replaced with matching panels.

Dimensions

- Height at least 1100mm (preferably 1200mm).
- Length 2000m.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the ‘Engineer’ to ensure full compliance with Wolverton Handbook requirements.

F50 PEDESTRIAN GUARD RAIL

Ordering Procedure

- Step 1 - Panel style: ....
- Step 2 - Panel size: ....
- Step 3 - Post dimension: ....
- Step 4 - Post height: ....
- Step 5 - Post cap option: Regent

Additional Comments

- Guardrail should be designed to permit clear sight of people or objects behind the railing when observed from an acute angle.

F60 TRAFFIC SIGNS

Role and Use

- For traffic regulation and direction.

Positioning

- Signs mounted as presented by the Secretary of State as indicated in the Traffic Signs Regulations and General Direction 2002. Preferred positioning non-intrusive in order of preference as follows:

    1. Building Mounted
    2. On lighting columns, bollards or other posts.
    3. Stand-alone on single posts (cantilevered if necessary).
    4. Stand-alone on two posts.

Traffic signs should be co-located wherever possible so as to avoid a 'forest' of signage which can over clutter the public realm.

Example product

Example product

Material/finish

- Colour and type prescribed by the Secretary of State as indicated in the Traffic Signs Regulations and General Directions 2002.
- Internally lit signs preferred, but externally lit signs also accepted.
- Internally lit signs: MDPE body with black outer and matt white inner finishes; acrylic sign face with encapsulated legend.
- Supporting columns: stainless steel (Grade 304 or 316); bead blasted lacquered finish. Posts should be finished/painted in Black.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Clearance to signs: 2.4 metres above ground level; increased to 2.7 metres where cyclists are present.
- Mounted back to back where possible rather than single aspect (signs mounted this way to be the same size).
- Maintained in accordance with manufacturer's instructions.

Available from

Simmonsigns Limited
Stafford Park 5
Telford,
Shropshire,
TF3 3AS
United Kingdom
Tel: 01952 293333
www.simmonsigns.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F60 TRAFFIC SIGNS

Dimensions

- Size prescribed by the Secretary of State as indicated in the Traffic Signs Regulations and General Directions 2002.
- Minimum sign dimensions preferred.
- The letter 'x' height (and hence sign size) based on the lowest road speed estimates consistent with the Regulations and Council policy in Wolverton.

Additional Comments

- Further comply with the specification for illuminated signs within the general street lighting specification prepared by Milton Keynes Council (Section 5).

F61 POINT-OF-ARRIVAL SIGN

Role and Use

- Approximate Number Based on preliminary route network plans and locations it is envisaged that there will be 3 No. locations.

Purpose

- Introduction to Wolverton.
- To orientate visitor at strategic arrival point.
- Confirm location.
- Give overview of area visitor is entering and detail of destinations.
- Invoke emotive response of welcome.
- Indicate direction on onward movement.

Example product

Information Content

- Location (including area name).
- Pedestrian Map of Wolverton.
- 'You are here' locator.
- Walking distance indicator.
- Basic information on other movement (transport) systems.
- City overview map.
- Redway map (to rear).

Generic Location

- Main arrival points excluding the elevated primary arrival locations. i.e. Bus station, main surface car parks, Multi Storey Car Parks (MSCP's).
- Panels to be orientated parallel to Boulevards so that maps read heads up.

Specification

- Arrival point structures to be consistent in form, structure and size across the Central area.
- Monolithic structure to carry a map panel either side.
- Base/plinth to be constructed either from dark granite slabs or cast iron

Available from

To be confirmed.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F61 POINT-OF-ARRIVAL SIGN

sections with wet applied paint finish.

- Main map to be either toughened glass with rear applied graphic or to be fabricated from mild steel with a Vitreous Enamel finish and applied graphics. Glass panels are potentially cheaper but more susceptible to damage and vandalism, vitreous enamel is more expensive but more durable. Providing the map and other information is kept consistent on each panel the sufficient economies of scale will make vitreous enamel viable. Graphics on a glass panel can potentially be backlit if desired. Final choice of material will be determined by any desire for backlighting, capital budget and the maintenance regime that can be applied.
- Area identification panel and side cladding to be fabricated from mild steel with a Vitreous Enamel finish and applied graphics.

F62 INFORMATION BOARDS

Purpose

- To convey notices and other information.
- To orientate.
- Confirm location.
- Give directional information/overview of town destinations.
- Indicate relative distance.

Example product

Information Content

- Notices
- Maps
- Key locations

Generic Location

- In key areas of interest with a high footfall

Example product

Specification

- Signage to be consistent in form, structure and size across Wolverton, particularly in the conservation centre.
- Sign consists of an openable and lockable perspex front, covering a notice board. Post system designed to match directional fingerposts and bollard systems throughout Wolverton.
- Manufactured from polyurethane cast around a steel core. Black polyurethane and paint finish.
- Hendon post style with Dome finial should be adopted.

Dimensions

- Height above ground 2400mm.
- Width 1500/1800mm.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F62 INFORMATION BOARDS

Ordering Procedure

- Step 1: Post Selector - Hendon Post, Black (Pictured).
- Step 2: Finial Selector - Dome Finial, Black (Pictured).
- Step 3: Notice Board Type - As required (Infrequent use - 1500mm wide or Frequent use - 1800mm wide available. Both are available with headers and footers, as pictured). All notice boards should be black, with 40mm white Gill Sans text.

F63 DIRECTIONAL FINGERPOST

Purpose

- To orientate.
- Confirm location.
- Give directional information / overview of town destinations.
- Indicate relative distance.
- Reinforce route.

Example product

Information Content

- Primary destinations.
- Walking distance indicator.
- Recognised indicative symbols.

Generic Location

- Along primary routes at main intersections with other primary routes and on other critical decision points on primary routes.

Example product

Specification

- Signage to be consistent in form, structure and size across Wolverton, particularly in the conservation centre.
- Sign posts and panels made from polyurethane cast around a steel core.
- Hendon post style with Dome finial should be adopted.
- Text centre justified on fingers in Gill Sans font in standard white.

Dimensions

- Total post length 4105mm.
- Height above ground 3575mm.
- Post diameter 114mm.
- Finger length 870mm (width variable).

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F63 DIRECTIONAL FINGERPOST

Ordering Procedure

- Step 1: Post Selector - Hendon Post, Black (Pictured).
- Step 2: Finial Selector - Dome Finial, Black (Pictured).
- Step 3: Finger Selector - Black, As required (Single to Quintuple available, including Half Collar which allows two fingers to be placed at the same height on the post).
- Step 4: Font Selector - Gill Sans Upper and Lower Case, 40mm, White, Raised, Centre Justified, Raised Black Border.

Additional Comments

- Individual panels can be removed and replaced for maintenance or updating of the system. By including only major destinations, changes would be less frequent and much cheaper than those needed for mapping components.

F64 STREET NAME PLATES

Purpose

- Confirm location.
- Primarily to improve orientation for pedestrians and cyclists but will also assist vehicular traffic.
- To acknowledge the traditional Victorian character of Wolverton through wall-mounting where possible.

Example original product

Information Content

- Street name.

Generic Location

- Street corners, particularly at the corners of blocks. Wall-mounted is preferable, although free-standing is acceptable where wall-mounting is not possible.

Specification

- Polyurethane Ferrocast signage.
- Where wall-mounted signs exist, these shall be retained. Elsewhere, freestanding signage will be removed and replaced with wall-mounted versions where possible (subject to a wayleave having been obtained).
- Wall mounted signs to have single sign panel face.
- Typface must be centred and set in Upper Case Gill Sans font, 87mm X height with a 20% letter space tracking.

Please contact Milton Keynes Engineering and Highways department for further fabrication and Installation Details.

Ordering Procedure

- Street Plate 43 or 429 according to size.
- Font: Gill Sans
- Font colour: Black
- Background colour: White
- Border colour: Black
- Fixing: Face fixed

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

F64 STREET NAME PLATES

F70 POLE-MOUNTED VEHICLE SIGNAL ASPECTS

Role and Use

- To display vehicle priorities instructed by the traffic controller.
- To enable central control and fault diagnosis.
- Clear signal in all weather conditions.
- Low power consumption.

Example product

Positioning

Signal heads mounted in order of preference as follows:

1. On lighting columns.
2. Pole-mounted back to back with other signal aspects.
3. Pole-mounted stand-alone.

- Where green arrow units are necessary 'four-in-a-line' mounting (rather than side-mounted) preferred.
- Dual primary and secondary traffic signals omitted where this can be demonstrated to be safe.

Material/finish

- Signal heads: metal and plastic painted black.
- Signal head backing boards: none.
- Signals: LED Central Light Source (CLS).
- Pole: stainless steel (Grade 304 or 316); bead blasted lacquered finish.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Regime as specified in the maintenance contract.
- Five year warranty required for new installations.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Signal heads: as specified by manufacturer.
- Poles: 114mm diameter.

Available from

Peek Traffic
Hazelwood House
Lime Tree Way
Chineham Business Park
Basingstoke
Hants
RG24 8WZ
Tel: 01256 891800
Fax: 01256 891870

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

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F70 POLE-MOUNTED VEHICLE SIGNAL ASPECTS

Additional Comments

- Fault diagnosis required.
- Where mounted on lighting columns, the compatibility of the electrical supply phases to the signal head with those to the street lighting needs to be checked.

Available from

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F71 POLE-MOUNTED PEDESTRIAN SIGNAL ASPECTS

Role and Use

- To display pedestrian priorities instructed by the traffic controller.
- To register a demand for pedestrians to cross.
- To detect the presence (or otherwise) of pedestrians on the crossing.
- To enable central control and fault diagnosis.
- To be comprehended by all road users, including visually and mobility impaired.

Example product

Positioning

Mounted in order of preference as follows:

1. On lighting columns or other poles (e.g. traffic signals).
2. Stand-alone.

- Near-side pedestrian aspects are preferred. These may need to be mounted as pairs (repeater units) where pedestrian flows are significant.

Material/finish

- Black as standard.
- Rotating cones: used to indicate pedestrian stages, where applicable.
- Tactile knobs provided on off-side push buttons.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Regime as specified in the maintenance contract.
- Minimum one year warranty required for new installations.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- As specified by the manufacturer.

Available from

Pedestrian Aspects:
Siemens Traffic Controls
Sopers Lane
Poole, Dorset
BH17 7ER
Tel: 01202 782070

Poles:
Stainton Metal Company Limited
Dukesway
Teeside Industrial Estate
Thornaby, Stockton-on-Tees
TS17 9LT
01642 766242
www.stainton-metal.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F71 POLE-MOUNTED PEDESTRIAN SIGNAL ASPECTS

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F81 BUS SHELTERS

Role and Use

- To protect waiting passengers from inclement weather.
- To provide a fixing surface for displaying route information, timetables, maps and wait-time LED displays.

Example product

Positioning

- Shelters should be clear of the pedestrian zone.
- Open fronted shelters may be necessary to retain adequate space for wheelchair manoeuvring.
- Advertising panels shall be parallel to the road so as not to block field of vision along the street.
- Seating, information boards and litter bins should be provided where space allows - for instance, integral to the shelter.
- The offset of the front wall of the shelter from the kerb face should be 2m with 1.6m absolute minimum.

Example product

Material/finish

- Ensure materials / finish are in keeping with with other street furniture such as lamp columns and litter bins

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

Depends on structures selected. Speak to the Council for further guidance

Additional Comments

- RTPI must be incorporated into design of bus shelter
- The bus shelter and surrounding footway should be well illuminated and maintained.
- Street furniture should be cleared upstream of the bus shelter as far as possible, so that passengers have a clear view of approaching buses.
- Enclosed shelters are preferred due to the extra protection from weather.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

Available from

Trueform
Unit 4, Pasadena Trading Estate
Pasadena Close
Hayes
Middlesex
England
Tel: 020 8561 4959
Fax: 020 8848 1397
sales@trueform.co.uk

F81 BUS SHELTERS

F92 GRIT STORES

Role and Use

- Grit bins are installed at locations that reflect the routes of high pedestrian flows and areas of higher risk that are inaccessible by conventional gritting methods.

Example product

Positioning

- Should be located at places that could become hazardous during icy conditions and where their use will be convenient, without obstructing or causing damage to property or landscaping by salt leakage.
- Located outside of clear pedestrian zone.

Material/finish

- Grey granite effect finish plastic containers. Should be weatherproof, fireproof and durable.

Installation & Maintenance

- In accordance with manufacturer's specification.
- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works"..

Dimensions

- Dimensions vary, typically 800-1250mm width x 400-700mm depth x 600-750mm height.
- Manufacturers often supply 'Slimline' versions which may be appropriate for locations with high pedestrian flows to maximise available space.

Additional Comments

- Grit stores should be replenished throughout the winter and consideration given to their removal and storage once the danger of ice has receded.

Available from

LINPAC Group,
3180 Park Square,
Birmingham Business Park,
Birmingham,
B37 7YN

Glasdon UK Limited,
Preston New Road,
Blackpool,
Lancashire,
FY4 4UL
Tel: 01253 600410
Fax: 01253 792558,
Email: sales@glasdon-uk.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F92 GRIT STORES

F93 PLANTER BOXES

Role and Use

- To be used where there is inadequate topsoil depth in public places due to services or hard formation below ground.
- Can also be used as architectural elements or where some flexibility in location is required.

Positioning

- Planters should be located so as to not obstruct pedestrian movement.
- Minimum distances between planters to allow access is 1.8m, however they could be positioned adjacent to each other to form a line if access is not required.

Material/finish

To be agreed

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

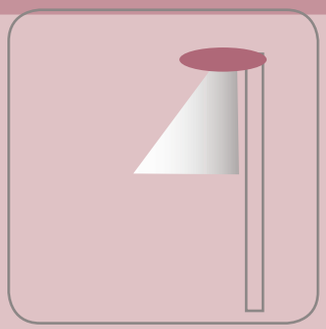
To be agreed

Available from

Christian Foundation, Wolverton

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

F93 PLANTER BOXES



lighting

Product sheets

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L1 GENERAL HIGHWAY LIGHTING

Role and use

- Used on main streets.
- All columns capable of carrying traffic signs up to 0.6 sq.m in area, bins, cameras and pedestrian push-buttons.
- Some columns to be capable of carrying mounted traffic signal aspects and pedestrian signal aspects.
- To prevent glare, no part of lamp to protrude below optic.
- Able to be monitored remotely using the SELC2000 electronic variable ballast system node and filter, with switch on and switch off facilities (70 lux and 35 lux). Uses attached mini cell supplied with ballast.

Example product

Positioning

- Minimum distance from trees 3m.
- Feeder pillars positioned outside the pedestrian 'clear zone.'

Example product: Double-headed

Material/finish

- Columns: painted and lacquered galvanised steel in Black.
- Lanterns: aluminium, painted in Black. No glued parts.
- Lamps: white light.
- Festival and advertising banners on lamp columns could be attached with the use of flexible spring loaded arms. Banners over 1700mm x 600m cannot be accommodated.

Installation & Maintenance

- Supplied with node, filter, ILON, relevant software ADSL line and feeder pillars if on a development site
  (or space for these to be fitted in the future if installed by the Council).
- Planted root base detail.
- Columns washed down every five years; no painting required.
- Damaged columns taken down and recycled.

Dimensions

Available from

Lanterns:
Metcraft (Lighting) Limited
13a Gateway Crescent
Oldham Broadway Business Park
Chadderton, Oldham OL9 9XB
Tel: 0161 683 4298
Email: info@metcraftlighting.com

Columns:
Fabrikat Ltd
Hamilton Road, Sutton-in-Ashfield
Nottinghamshire,
NG17 5LN England
Tel: 01623 442200
Email: sales@fabrikat.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

L1 GENERAL HIGHWAY LIGHTING

- 8m tall.
- Columns: conically tapered sweep from 186mm diameter to 76mm spigot, or as agreed with the engineer.

Standards

- Design to BS5489:2003 in conjunction with BS EN13201:2003.
- Design luminance to ME3A and conflict areas at junctions to CE2.
- Lantern protection to BSEN60529:1992 – Category IP66 preferred. Unless otherwise agreed with the authorising officer.

Ordering Details

- Ely A lantern
- Polycarbonate tear drop bowl
- Arc column bracket
- Finished in Black

Additional Comments:

- Further comply with the specification for street lighting prepared by Milton Keynes Council (Section 5).

L2 FOOTWAY LIGHTING

Role and use

- Used to light pedestrian areas.
- Columns capable of carrying small signage.
- To prevent glare, no part of lamp to protrude below optic.
- Able to be monitored remotely using the SELC2000 electronic variable ballast system node and filter, with switch on and switch off facilities (70 lux and 35 lux) to avoid the need for a separate photocell.

Example product

Positioning

- Minimum distance from trees 2m.
- Feeder pillars positioned outside the pedestrian 'clear zone.'

Material/finish

- 'Ely' lantern.
- Columns: painted and lacquered galvanised steel in Black.
- Lanterns: aluminium, painted in Black. No glued parts.
- Lamps: White light.
- Where appropriate double-headed Ely lanterns can be used.

Example product

Installation & Maintenance

- Supplied with node, filter, ILON, relevant software ADSL line and feeder pillars if on a development site (or space for these to be fitted in the future if installed by the Council).
- Columns washed down every five years; no painting.
- Damaged columns taken down and recycled.

Dimensions

- 5.5m column height, this makes the light source 6m high for calculation purposes.
- Column: conically tapered from 145mm diameter to 76mm spigot, or as agreed with the engineer.

Available from

Embellishment Kits & Lanterns:
DW Windsor, Pindar Road
Hoddesdon, Hertfordshire
EN11 0DX
Tel: 01992 474600
www.dwwindsor.co.uk

Columns:
Stainton Metal Company Limited
Dukesway
Teeside Ind Estate, Thornaby,
Stockton-on-Tees, TS17 9LT
Tel: 01642 766242
www.stainton-metal.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

L2 FOOTWAY LIGHTING

Standards

- Design to BS5489:2003 in conjunction with BS EN13201:2003.
- Design luminance to CE2; footways and Park Extension redways to S4.
- Lantern protection to BSEN60529:1992 – Category IP66 preferred.

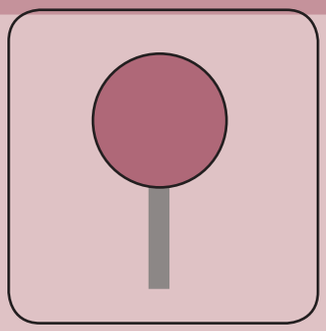
Ordering Details

- Ely B Lantern
- Polycarbonate tear drop bowl
- Swan Neck bracket
- Finished in Black

Additional Comments:

- Further comply with the specification for street lighting prepared by Milton Keynes Council (Section 5).

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.



landscape

Product sheets

LA1 CHERRY - *Prunus hillieri* 'Spire'

Role and use

- Refer to latest version of MKC 'Guidance and Requirements for Street Trees'.

Example product

Positioning

- Generally planted in the footway.
- Minimum footway width varies.
- Located outside of clear pedestrian zone.
- Minimum clear pedestrian zone 1.2m.
- Minimum distance from building 2m.
- Allow 1m clear space from the front edge of the kerb.

Installation & Maintenance

- Minimum tree pit 1200 x 1200 x 900mm (length x width x depth).
- All tree pits to include underground guying, positive drainage and watering pipe (See drawing ... for guidance).
- Trees within 1200mm of underground services or kerbs should include root barriers.
- Enhanced maintenance for three years post installation.

Dimensions

- Minimum girth 14-16mm.

Standards

- Planting BS4428:1989 & BS5837:2005.
- Maintenance BS7370:1993.

Additional Comments:

- Mature height 6m.
- Mature width 3m.
- Hardy.

Available from

Hillier Nurseries Limited
Ampfield House
Ampfield
Romsey
Hampshire
SO51 9PA
Tel: 01794 368 733
Fax: 01794 368 813
www.hilliertrees.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

LA1 CHERRY - *Prunus hillieri* ‘Spire’

LA2 NORWAY MAPLE - *Acer platanoides* 'Obelisk'

Role and use

- Refer to latest version of MKC 'Guidance and Requirements for Street Trees'.

Example product

Positioning

- Generally planted in the footway.
- Minimum footway width varies.
- Located outside of clear pedestrian zone.
- Minimum clear pedestrian zone 1.2m.
- Minimum distance from building 2m.
- Allow 1m clear space from the front edge of the kerb.

Installation & Maintenance

- Minimum tree pit 1200 x 1200 x 900mm (length x width x depth).
- All tree pits to include underground guying, positive drainage and watering pipe (See drawing ... for guidance).
- Trees within 1200mm of underground services or kerbs should include root barriers.
- Enhanced maintenance for three years post installation.

Dimensions

- Minimum girth 14-16mm.

Standards

- Planting BS4428:1989 & BS5837:2005.
- Maintenance BS7370:1993.

Additional Comments:

- Mature height 10m.
- Mature width 1.5m.
- Hardy.

Available from

Hillier Nurseries Limited
Ampfield House
Ampfield
Romsey
Hampshire
SO51 9PA
Tel: 01794 368 733
Fax: 01794 368 813
www.hilliertrees.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

LA2 NORWAY MAPLE - *Acer platanoides* ‘Obelisk’

LA3 MOUNTAIN ASH - *Sorbus aucuparia* 'Sheerwater Seedling'

Role and use

- Refer to latest version of MKC 'Guidance and Requirements for Street Trees'.

Positioning

- Generally planted in the footway.
- Minimum footway width varies.
- Located outside of clear pedestrian zone.
- Minimum clear pedestrian zone 1.2m.
- Minimum distance from building 2m.
- Allow 1m clear space from the front edge of the kerb.

Example product

Installation & Maintenance

- Minimum tree pit 1200 x 1200 x 900mm (length x width x depth).
- All tree pits to include underground guying, positive drainage and watering pipe (See drawing ... for guidance).
- Trees within 1200mm of underground services or kerbs should include root barriers.
- Enhanced maintenance for three years post installation.

Dimensions

- Minimum girth 14-16mm.

Standards

- Planting BS4428:1989 & BS5837:2005.
- Maintenance BS7370:1993.

Additional Comments:

- Mature height 7m.
- Mature width 3m.
- Hardy.

Available from

Hillier Nurseries Limited
Ampfield House
Ampfield
Romsey
Hampshire
SO51 9PA
Tel: 01794 368 733
Fax: 01794 368 813
www.hilliertrees.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

LA3 MOUNTAIN ASH - *Sorbus aucuparia* ‘Sheerwater Seedling’

LA4 MOUNTAIN ASH - *Sorbus aucuparia* 'Streetwise'

Role and use

- Refer to latest version of MKC 'Guidance and Requirements for Street Trees'.

Positioning

- Generally planted in the footway.
- Minimum footway width varies.
- Located outside of clear pedestrian zone.
- Minimum clear pedestrian zone 1.2m.
- Minimum distance from building 2m.
- Allow 1m clear space from the front edge of the kerb.

Installation & Maintenance

- Minimum tree pit 1200 x 1200 x 900mm (length x width x depth).
- All tree pits to include underground guying, positive drainage and watering pipe (See drawing ... for guidance).
- Trees within 1200mm of underground services or kerbs should include root barriers.
- Enhanced maintenance for three years post installation.

Dimensions

- Minimum girth 14-16mm.

Standards

- Planting BS4428:1989 & BS5837:2005.
- Maintenance BS7370:1993.

Additional Comments:

- Mature height 7m.
- Mature width 3m.
- Hardy.

Example product

Available from

Hillier Nurseries Limited
Ampfield House
Ampfield
Romsey
Hampshire
SO51 9PA
Tel: 01794 368 733
Fax: 01794 368 813
www.hilliertrees.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

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LA4 MOUNTAIN ASH - *Sorbus aucuparia* ‘Streetwise’

LA5 CRAB APPLE VARIETY - *Malus trilobata*

Role and use

- Refer to latest version of MKC 'Guidance and Requirements for Street Trees'.

Example product

Positioning

- Generally planted in the footway.
- Minimum footway width varies.
- Located outside of clear pedestrian zone.
- Minimum clear pedestrian zone 1.2m.
- Minimum distance from building 2m.
- Allow 1m clear space from the front edge of the kerb.

Installation & Maintenance

- Minimum tree pit 1200 x 1200 x 900mm (length x width x depth).
- All tree pits to include underground guying, positive drainage and watering pipe (See drawing ... for guidance).
- Trees within 1200mm of underground services or kerbs should include root barriers.
- Enhanced maintenance for three years post installation.

Dimensions

- Minimum girth 14-16mm.

Standards

- Planting BS4428:1989 & BS5837:2005.
- Maintenance BS7370:1993.

Additional Comments:

- Mature height 6m.
- Mature width 2.5m.
- Hardy.

Available from

Hillier Nurseries Limited
Ampfield House
Ampfield
Romsey
Hampshire
SO51 9PA
Tel: 01794 368 733
Fax: 01794 368 813
www.hilliertrees.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with Wolverton Handbook requirements.

LA5 CRAB APPLE VARIETY - *Malus trilobata*

Issue no.1 August 2012

LA6 CRAB APPLE VARIETY - *Malus tschonoskii*

Role and use

- Refer to latest version of MKC 'Guidance and Requirements for Street Trees'.

Example product

Positioning

- Generally planted in the footway.
- Minimum footway width varies.
- Located outside of clear pedestrian zone.
- Minimum clear pedestrian zone 1.2m.
- Minimum distance from building 2m.
- Allow 1m clear space from the front edge of the kerb.

Installation & Maintenance

- Minimum tree pit 1200 x 1200 x 900mm (length x width x depth).
- All tree pits to include underground guying, positive drainage and watering pipe (See drawing ... for guidance).
- Trees within 1200mm of underground services or kerbs should include root barriers.
- Enhanced maintenance for three years post installation.

Dimensions

- Minimum girth 14-16mm.

Standards

- Planting BS4428:1989 & BS5837:2005.
- Maintenance BS7370:1993.

Additional Comments:

- Mature height 6m.
- Mature width 3m.
- Hardy.

Available from

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SO51 9PA
Tel: 01794 368 733
Fax: 01794 368 813
www.hilliertrees.co.uk

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Issue no.1 August 2012

LA6 CRAB APPLE VARIETY - *Malus tschonoskii*

Urban Design & Landscape Architecture
Environment Directorate
Milton Keynes Council
PO Box 113, Civic Offices
1 Saxon Gate East
Milton Keynes, MK9 3HN

T +44 (0) 1908 252708
F +44 (0) 1908 252329
E urban.design@Milton-keynes.gov.uk

www.milton-keynes.gov.uk/UrbanDesign