city of stoke on trent

The Caldon Canal

Conservation Area Review

March 2012

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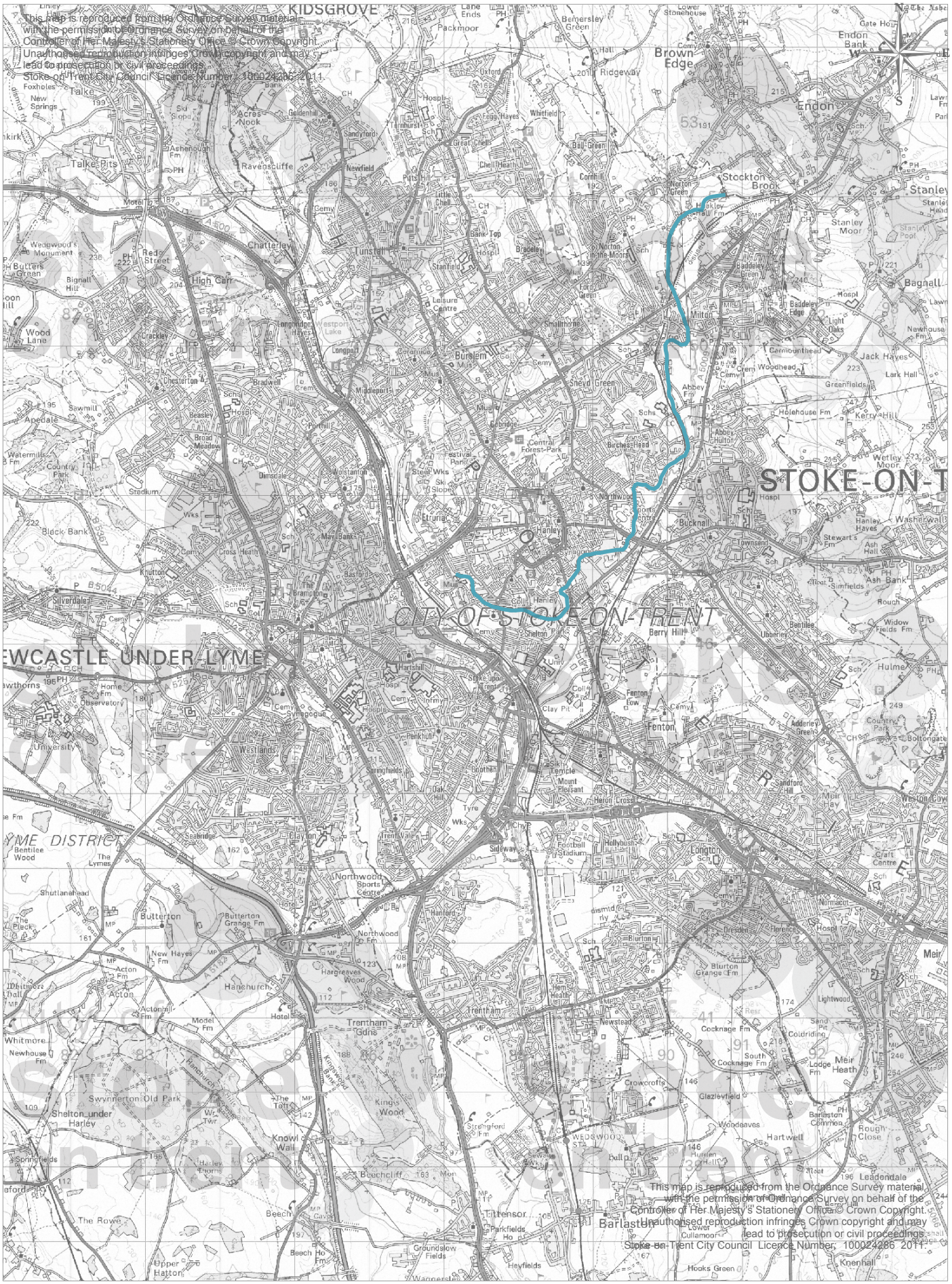


Plan 1: Location Plan to show the Caldon Canal within the North Staffordshire Conurbation

1. The Purpose of the Conservation Area Appraisal

The Caldon Canal Conservation Area has been assessed by English Heritage as being in a very bad condition, showing medium vulnerability and has been added to the Conservation Areas at Risk Register, as compiled by English Heritage.

In the face of significant change within the inner urban core of Stoke-on-Trent, the revised appraisal analyses and defines in depth the special interest and characteristics of the historic structure of the canal and its setting.

The appraisal identifies the pressures and challenges facing the survival of the Caldon Canal as a historic feature.

Recommendations for courses of action are then proposed, in order to aid the sensitive management, preservation and enhancement of the Caldon Canal.

The analysis and subsequent recommendations form the evidence basis for the management strategy (to follow).

2. Appraisal Approach

The approach of the appraisal produced in 1994 treated the canal as a coherent single historic element. Because of the decline of industry and subsequent replacement development, the canal now reads as the stitching seam and defining edge between a series of different functioning environments. The revised appraisal explores the adjoining historic and present day environments, in order to understand better historic and current functions, and how the resulting form contributes to the setting of the canal. This approach enables the different character areas adjacent to the canal to be recognised.

Distinctive character areas have been identified, in order to support this approach (please refer to appendix 1). The character areas identified, from west to east, are as follows:-

1. Etruria Junction
2. Shelton
3. Hanley Park and Hanley Park East
4. City Waterside
5. Northwood
6. Birches Head
7. Sneyd Green
8. Milton
9. Norton

3. Consultation

In order to facilitate the review of the 1988 conservation area appraisal a steering group was set up with interested stakeholders, including British Waterways, Inland Waterways, English Heritage, Caldon and Uttoxeter Canal Society & The Staffordshire Wildlife Trust. Representatives of the City Council were also invited, including planning policy, ecology, development management. the City Cycle team and City Renewal. An exercise in public consultation with landowners and residents was undertaken, in the form of a leaflet drop and public meeting.

Comments from stakeholders and landowners have informed the revised conservation area boundary and content of this document.

4. References

The following documents have been referred to in the review of the Caldon Canal Conservation Area Appraisal:-

- Caldon Canal Conservation Area Appraisal, 1994 (Stoke-on-Trent City Council)
- Stoke-on-Trent's Canals: A Strategy for the Conservation, Enhancement and Regeneration of the Canal Network, September 1997 (Stoke-on-Trent City Council)
- Stoke-on-Trent City Historic Environment Record
- A History of the County of Staffordshire vol. 8, 1963 (Oxford University Press)
- Ward, J. *The Borough of Stoke-upon-Trent*, 1843 (Webberley Ltd.)
- *A plan of the Norton estates of Charles Bowyer Adderley*,1771
- Yates, *Map of the County of Stafford*,1775
- Allbut, A *Map of the Potteries, Staffordshire*, 1802
- Hargreaves, *Map of the Staffordshire Potteries & Newcastle*, 1835
- Tithe map of Norton, 1843
- Historical Ordnance Survey maps of the Caldon Canal, 1880 – 1937

5. Legislative & Planning Context

This character area appraisal has been prepared for the Caldon Canal Conservation Area, whose boundaries were designated in September 1994, with subsequent revision to the boundaries approved by Stoke-on-Trent City Council on 29/01/2013.

Conservation Areas are designated by Local Authorities under fulfilment of duties imposed by section 69 of the Planning (Listed Buildings and Conservation Area) Act 1990. This defines Conservation Areas as:

'areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance'.

Special interest may originate from a variety of sources, while character is defined in a holistic sense rather than deriving from the merits of any single building.

Production of Character Appraisals was required under the Office of the Deputy Prime Minister's Best Value Initiative (BVPI 219), though best practice has long required their preparation. The objective of an appraisal is to analyse and define in depth the special interest and traits which make up the character of a conservation area, to identify the pressures and challenges facing its survival and to recommend courses of action which will aid in achieving sensitive management, preservation and enhancement (the latter points fulfilling duties imposed by section 71 of the 1990 Act). This BVPI has now been replaced by a local indicator.

Conservation Area status is a material consideration in the evaluation of planning applications. Here section 72 of the 1990 Act requires local planning authorities to pay special attention to the desirability of achieving preservation or enhancement through their decision making. Appraisals represent an important resource in fulfilling such duties while Planning Policy Statement 5, Planning for the Historic Environment, provides a principal point of guidance. Where new development is planned conservation area appraisals may provide a useful design resource to those proposing it.

Conservation area status curtails certain 'permitted' householder development rights requiring planning permission to be sought in these areas (outlined in the General Permitted Development Order 1995).

English Heritage recommends production of distinct Management Strategy documents for each conservation area. The basis of these documents is the analysis contained within and recommendations arising from each appraisal. These documents will provide a boost in efficiency while helping to ensure fulfilment of statutory duties. In the context of the new Local Development Framework (LDF) these management strategy documents may eventually be adopted as Supplementary Planning Documents.

The Newcastle-under-Lyme and Stoke-on-Trent Core Spatial Strategy 2006 – 2026 was adopted in October 2009. Policy CSP2: Historic Environment makes specific reference to the requirement to preserve and enhance the character and appearance of the historic heritage of the City, including buildings, monuments, sites and areas of special archaeological, architectural or historic significance. Through the adoption of this policy, the authority has committed to fulfilling statutory duties regarding conservation areas and listed buildings. This policy sets design and development standards, while introduces two non-statutory 'lists' of relevance to this Appraisal: a Local List (Buildings of Special Local Interest) and Areas of Archaeological Importance.

Within the original conservation area designation, article 4 directions were put in place for some areas of the conservation area, as follows:-

1. No painting or re-painting of any external brickwork of any building shall occur without prior consent of the Authority.
2. There shall be no extension, alteration or addition of industrial buildings permitted in Class V111 without prior consent of the Authority.
3. There shall be no replacement of any brick set paved surfaces without the prior consent of the Authority.

These article 4 directions shall remain in place, but have not been extended to cover the revisions to the conservation area boundary. Where the extent of the original conservation area has been reduced, the extent of article 4 directions shall be reduced to reflect the revised conservation area boundary. The extent of these existing directions can be obtained on enquiry to Stoke-on-Trent City Council.

When reading or using an appraisal it is important to note that while every effort is made to provide detailed analysis the document can never be comprehensive. Failure to mention a particular element or detail must not be taken to imply that it is of no importance to an appreciation of character or appearance of the Conservation Area and thus of no relevance in considering planning applications.

This appraisal has been produced by the City Renewal Directorate (Planning Policy & Design), Stoke-on-Trent City Council. Enquiries regarding this Appraisal should be addressed to:

The Planning Policy & Design Tream: *01782 235023* **or** *01782 232154*

Tree Officer: *01782 232556*

6. The Study Area

The Caldon Canal is located on an east-west axis, extending 10km through the breadth of Stoke-on-Trent. The canal enters Stoke-on-Trent at Norton in the east and joins with the Trent & Mersey Canal at Etruria Junction in the west. As with most early canals its route generally follows the contours of the landscape, along the valley of the River Trent, in places running close beside it, in order to minimise construction difficulties and costs.

Historically, the Stoke-on-Trent canal system formed the industrial heartland of the North Staffordshire conurbation and the backbone to the market towns of Stoke-on-Trent, with each town's industry developing because of access to the canals and the wider world. Industries included steel and iron works, coal mining and ceramics and raw materials manufacturing. The Caldon Canal linked with Hanley, Milton and Norton.

Many of these industries have now fallen into decline. The coal, steel and iron industries are now obsolete, and only a few spatterings of potteries still operate along the edge of the canal. With the decline of industry, the historic use of canals as an industrial transport route has fallen into disuse. The Caldon canal now functions as a recreational cruising route for boaters. Given current national policies for sustainable living and brownfield development, a chance now exists for the Caldon Canal in Stoke-on-Trent to re-invent itself to suit modern day needs, whilst maintaining the character of these linear water channels.

7. Historic Significance and Patronage

The Caldon Canal forms part of a network of waterways that helped transform the means by which goods and materials were transported in and around north Staffordshire towards the end of the 18th century. The impact of this and other canals upon the development of industry within the area was profound, facilitating the growth of Stoke-on-Trent as a global centre of ceramic production. The Caldon also acted as a feeder for the Trent & Mersey Canal, itself one of the most significant and remarkable feats of civil engineering of the industrial revolution.

Construction of the Caldon Canal commenced under Act of Parliament in 1776. The Canal was conceived by the proprietors of the Trent & Mersey in 1773, who wished to create a branch from the Trent & Mersey at Etruria to Froghall, where a railway line would provide a link with limestone quarries at Caldon Low. The Trent & Mersey Canal Company successfully blocked a rival attempt to provide a connection to Leek, partly by securing contracts with the Caldon Low quarries and a number of local collieries in advance of the Act of 1776. Another factor in the building of the Caldon Canal was the need to create an additional water supply to the Trent & Mersey. The Caldon achieved this aim by acting as a conduit between its feeder reservoirs at Knypersley and Stanley, and the Trent & Mersey. Its usefulness in this respect is remarked upon in a report to the proprietors of the Trent & Mersey of 1787:

> 'the Caldon branch has greatly contributed to the assistance of this Navigation, not only as the vehicle of the Waters from the above Reservoirs, but also of others, necessary to its support, into the summit at Harecastle, from whence the numerous Locks to the Trent, and to the Mersey, are filled and supplied'.

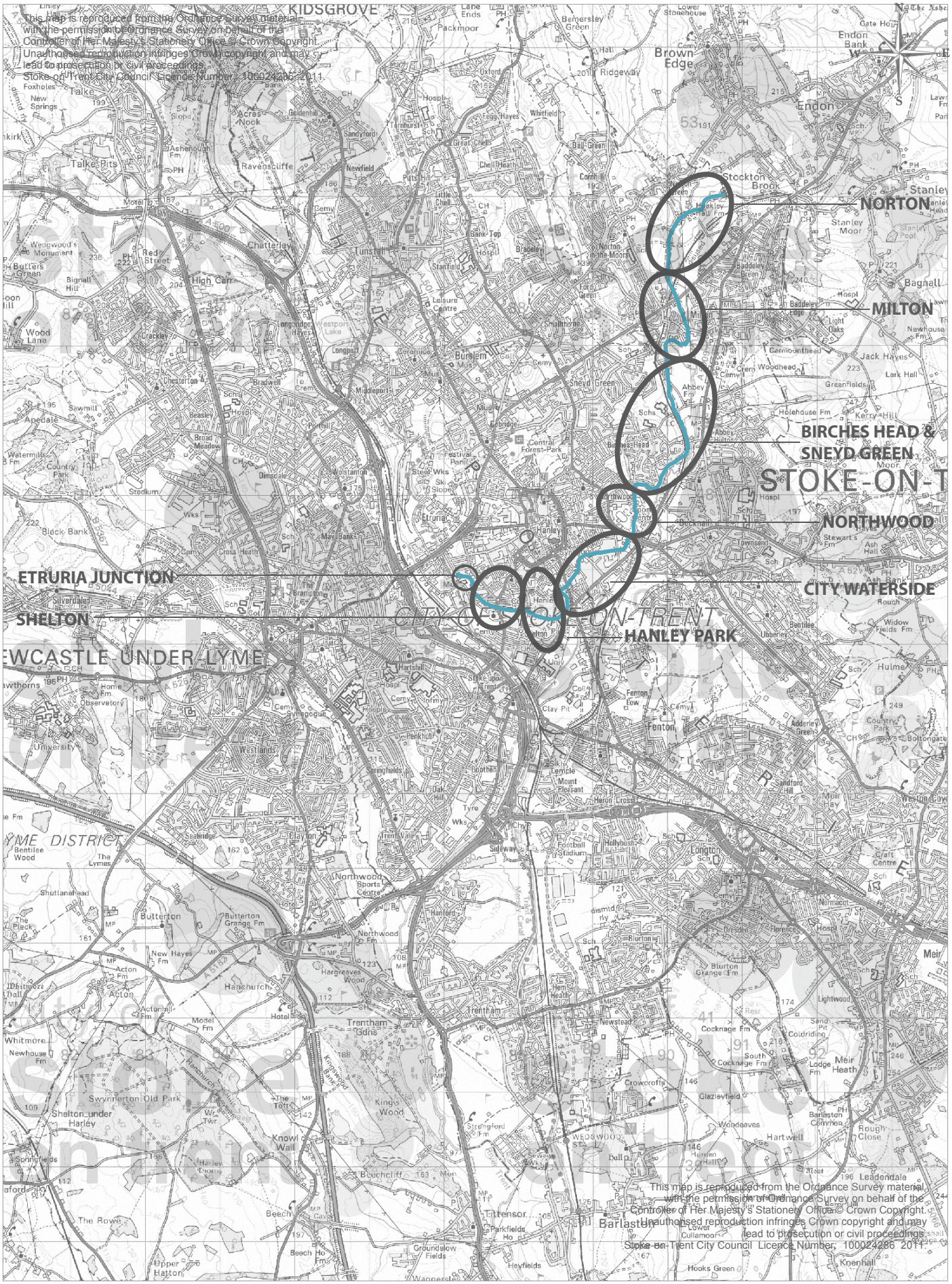
The first stage of the Caldon from Etruria to Froghall (including the railway line to Caldon Low) was opened in 1777 and cost a total of £23,560. An Act of 1797 authorized the construction of a branch canal from the Caldon to Leek and the creation of a reservoir at Rudyard in the Churnet Valley. Another Act of 1797 permitted the extension of the Caldon from Froghall to Uttoxeter. This final stretch opened in 1811, but enjoyed only a brief active life, closing in the late 1840s. Other short branches from the Caldon connected to Cockshead Colliery at Norton Green (1778) and the Robert Heath and Son foundry at Foxley (*c.*1866).

The Caldon was used to transport all manner of goods, including limestone, coal, flint and iron ore. It directly served a number of pottery factories, foundries, mills and limekilns that had been developed on its banks by the second half of the 19th century. Unsurprisingly, most of these sites were concentrated at the western end of the canal, within or close to the industrial and commercial centres of Etruria, Shelton and Hanley. To the north east of the city, the Canal passed through areas that remained predominantly agricultural.

The waterways of the Trent & Mersey Canal Company were sold to the North Staffordshire Railway in 1847 and, initially, were operated in conjunction with newly-developed rail links. In common with other canals in Staffordshire, however, the commercial use of the Caldon began to decline in the closing years of the 19th century, with manufacturers gradually shifting towards the transportation of goods and materials by rail. Despite developments such as the construction in 1905 of the interchange wharf at Endon, where limestone transported by rail could be transferred to barges, the decline of the canal continued throughout the early 20th century. Commercial traffic had effectively abandoned the Canal by the early 1960s and, although never formally closed to navigation, the Canal subsequently fell into disrepair and was maintained only to provide a supply of water to the Trent & Mersey. The Transportation Act of 1968 classed the Caldon as a 'remainder waterway', removing any requirement on the part of British Waterways to maintain the Canal to a navigable standard.

By this time, however, efforts were already underway to restore the Canal, with volunteers of the Caldon Canal Society (established in 1963 as the Caldon Canal Committee) working to reverse its decline. In 1968, the firm of Johnson Brothers began to use the Hanley to Milton stretch of Caldon to transport goods between its Imperial and Eagle pottery works. This continued until 1995 and the closure of the Imperial Works. In 1970, a £100,000 restoration project for the Canal was agreed between Staffordshire County Council, Stoke-on-Trent City Council and British Waterways. The stretch of the Caldon between Etruria and Froghall reopened on the 28th September 1974. Nine years later status of the Canal was upgraded to that of a 'cruising waterway' and continues to be used for tourism and leisure purposes to the present day.

Even though many of the industrial sites along the Caldon have now been demolished and, in some cases, redeveloped, some historic factories remain. Foremost amongst these is the Eastwood Works on Lichfield Street, a late 19th-century potworks still in operation under the ownership of Emma Bridgewater. The Canal also passes through Hanley Park, a nationally designated Historic Park and Garden, and, towards its northern end (within the city boundary) skirts the site of a medieval moated house, Heakley Hall Farm. Twenty-one historic bridges cross the Canal within the city, one of which has an adjacent lock (Engine Locks, Norton).



Plan 2: The Location of the character areas on the Caldon Canal

8. ETRURIA JUNCTION

Fig. 1: View of informal landscape setting from pedestrian bridge

8.1: Introduction

"Etruria Junction is the meeting point of the Trent and Mersey and the Caldon Canal. The canal conservation area boundaries converge with each other at this point. The historical importance of Etruria as an industrial area is evidence by the fact that is was targeted by the Luftwaffe during the second world war. Photographs from the 1970's show how much the area has become gentrified over recent years, with industrial sites being replaced with good quality landscape treatments, to provide a heritage offer set within a mature green setting. The hum of industrial premises can still be heard in this area.

8.2: Archaeology

The junction of the Trent and Mersey Canal and the Caldon Canal was formed at Etruria at the area known variously as Etruria Wharf and Etruria Basin. Apart from the Trent and Mersey canal, the area is shown as empty on the 1775 map, suggesting that the canals were the main stimulus to development in the area. The Caldon Canal was used to ship coal and

limestone from Froghall to North Staffordshire and Cheshire. As the Caldon Canal passes the Etruria Industrial Museum it ascends through Bedford Street Locks, which are the only remaining staircase locks in North Staffordshire. As well as wharves and industrial buildings next to the wharf, there was a gas works supplying Hanley and a pottery factory by the early 19th century. A tramway ran from the wharves to Hanley.

Stoke-on-Trent's first public infirmary was built on the west bank of the Caldon Canal in 1804, as a 'Dispensary and House of Recovery'. The infirmary was moved to another site in Etruria in 1819 and the building used as lodgings for canal staff. By 1900 the infirmary buildings had been obliterated by expansion of the gas works.

Residential development in the study area only began in the early 20th century when Dundee, Ladysmith, and Kimberley roads were laid out and partly occupied by terraced housing, completed with semi-detached housing in the inter-war period. Recently much of the industrial activity has been replaced by housing along Etruria Vale Road and by greenspace along the west bank of the canal. The wharves are now used largely for recreational boating with a 19th-century flint mill preserved as an industrial museum.

8.3: Historic and Existing Land Uses and Function

Prior to the construction of the canal, the area would have been rural in character. A remnant of agricultural use is evident in the 1900 map to the north of the Graving Dock. Once implemented, the canal functioned as a working canal for the transportation of goods and raw materials such as coal and limestone, supporting the surrounding industrial uses which mainly consisted of the pottery industry. The area would have been characterised by extensive areas of derelict land and waste ground forming an incoherent environment, interspersed with industrial buildings of simple and modest brick construction, situated adjacent to wharfs.

With the decline in industry, Etruria has become gentrified, providing a heritage and leisure offer for visitors and local residents, set within a mature landscape setting. The canal serves as a leisure boat route, whilst the towpath provides off road walking and cycling routes. Recreational angling also takes place. Some canalside industry remains, but there is a general movement of industry away from the canal towards major highways infrastructure. Attractive green open space provides valuable wildlife habitat and amenity space to local residents and serves as a natural buffer between housing and remaining industrial uses. The gentrification of this area has resulted in an increase in residential land uses, where families can take advantage of the high quality natural environment for amenity uses.

8.4: Character of the Built Form

Listed and Unlisted Buildings of Importance

The Jesse Shirley Bone and Flint Mill was originally operated by the Shirley family until 1975. The Mill is the only operational steam powered Potters Mill in the country and retains all of its original machinery. Dating back to 1857, the original building is now listed as a Scheduled Monument and is situated within the Trent & Mersey Canal conservation area. A description of the original mill is included within the Trent & Mersey Canal conservation area appraisal.

Further additions have taken place to the factory over the years, as the business has expanded, showing piecemeal development over time. The extension that is attached to the original mill is a grade II* factory building. Other extensions feed off from this later extension and fall within the Caldon Canal conservation area boundary. The extensions to the original mill are constructed from brick and metal sheeting. The apertures contained within the walls are large and few, allowing for vehicular traffic and feeder hoppers. The roofscape has been modified to allow for equipment and apparatus to extrude through the roof, with no restrictions as to height or width. Skylights allow light into the main body of the building. The use of the roof as a surface plane for extensions allows full scope for operational modification, whilst maintaining the circulation uses at ground level. A traditional brick chimney is also located

within the roofscape, showing a square section to the base. A weighing bridge is located adjacent to the main entrance, next to the office block.

A warehouse is situated to the east of the main factory block. The architectural style of this building can be best described as paired down classicism in modernist style. Constructed of brick and concrete, concrete triglyphs occur to the eaves of the building, with a parapet in brick. Concrete surrounds to the windows indicate that this building was constructed during the early 1950's, shortly after the war. The sense of proportion and style suggests that this building was consciously designed following architectural principles. This is unusual for an industrial building adjacent to the canal. The building presents an anomaly to the norm for canalside industrial buildings.

Fig. 2: Industrial warehouse, constructed during the post-war growth period

The visitor centre is a more modern building, the layout of which has been designed to integrate with the finer grain of the forge and other canalside buildings, whilst allowing access to the canalside wharf alongside the original Jesse Shirley Mill.

Architectural Character, Materials, Colours and Textures

The character of this area can best be described as informal. The buildings are organic and utilitarian, located within an informally arranged landscape setting. The use of stone within the Bedford Locks set within the natural landscape setting suggests a rural character, which is at odds with the industrial aesthetic of the extensively modified Jesse Shirley complex and surrounding urban environment. Materials within the green open space are comprised predominantly of stone. The industrial character is comprised of corrugated metal, bricks and concrete. Muted browns and blues are common within the Jesse Shirley site. The definition of colours within the green space is more pronounced, with strong contrasts, such as black and white detailing to the lock, set against lush greens.

Built Form & Massing

The topography and trees partially screen the Jesse Shirley industrial complex from view. The scale and massing of the Jesse Shirley complex contrasts with the smaller scale of the original canalside buildings situated within the Trent & Mersey canal conservation area boundary. The buildings possess a larger floor plate and are higher, with a deeper plan and higher roof pitch. The visitor centre for the Etruria Industrial Museum appears to possess a much smaller floor plate, in similar fashion to the forge, but takes advantage of the significant change in levels to extend the floor plate in a sensitive and unobtrusive manner, to open out to the lower levels of the Jesse Shirley Mill, with a connecting bridge.

The brick boundary walls and overhanging tree canopies to lower Bedford street create an intimate scale on approach to the bridge that crosses the Trent & Mersey canal.

Fig. 3: Intimate sense of enclosure to Lower Bedford Street

Style

As mentioned previously, the warehouse built in the 1950's is built in the modernist style. All other buildings in the conservation area are utilitarian.

Roofs

The roofscape of the Jesse Shirley factory complex is extraordinary. A legacy of extensions, technical advancements and operational requirements has led to an array of punctuating elements extending above a series of pitched roofs, including chimneys and silos. These operational elements add visual interest to the area and present an interesting skyline. The older buildings still exhibit clay roof tiles but newer extensions have used metal sheeting materials.

Details and Features

Bedford Locks present a significant engineering feature. The double staircase of two locks overcomes the challenge of significant level changes at this location. A series of curved brick retaining walls define the physical structure, with steps linking the two distinct platforms associated with the locks. Stone setts have been used to pave the platforms, with later additions of clay paviours in some instances. An accompanying flight of stone risers and treads set to a fall is situated to the western edge of the locks, extending their length.

A single span arched bridge, of modern design, is also a distinctive feature that spans the Caldon Canal, and is constructed of white polyester powder coated metal.

Groundscape & Public Realm

Access to the Etruria locks is restricted, due to weight restrictions on the bridges for vehicles. Consequently, pedestrian and cycle access is given very high priority over vehicles. This creates an opportunity for Etruria locks to become a very sociable space for local residents and visitors alike. However, the public realm and associated buildings do not support sociable activities at present.

Tree planting and grassed areas significantly enhance the quality of canal-side setting, with mature tree planting framing key views towards the canal and surrounding heritage features. However, areas of regenerative tree planting partially obscure views towards key heritage industrial assets.

Fig. 4: View of informal landscape setting from pedestrian bridge

Black and white public realm elements are numerous adjacent to the canal, suggesting a consistent colour strategy has been adopted in this area that helps to brand the heritage offer of Etruria Locks Other public realm elements lack consistency in materials palette and design. By way of example, paving materials include resin bound gravel, red brick paviours, stone setts, concrete, aggregate setts, tarmac, concrete flags and Staffordshire blue brick

paviours. A more consistent approach to paving that sympathetically enhances the visual quality of the heritage assets further would be more appropriate. The double boundary treatment of white painted handrails and galvanised steel handrails to the bridge looks messy and the stepped arrangement of access across the bridge precludes inclusive access. Families with prams will find this link difficult to negotiate. Issues of safety should be resolved in a more subtle manner on this important link.

Public realm treatments to the car park are not sympathetic to the historic character of the canal, and make no reference to the former wharf in this area. Lighting fixtures are sparse, suggesting that night time lighting is minimal. Likewise, provision for seating is limited to one seat in this area. More seating would support greater amenity use in this area for local residents.

Notably, this area is litter free and the public realm is well maintained.

8.5: Ecology and Landscape Designations

The canal corridor is designated as a wildlife corridor, providing for the movement of wildlife through the conurbation.

Tree and shrub cover within the public open space at Etruria Locks provides bat territories. The parkland setting of Hanley Cemetery provides for additional habitat types in close proximity to the conservation area.

8.6: Topography, Views & Enclosure

The Caldon Canal ascends, as the Trent & Mersey descends at Etruria locks. The Bedford Street locks and associated stone steps within this area testify to the undulating topography that necessitated their construction. The levels flanking the canal from the lower section of the Bedford Locks to the junction with the Trent and Mersey are relatively flat. Gradients to the rear of the Etruria Museum fall away to meet with the levels of the Trent & Mersey canal.

Generally, the quality of views within and out of the conservation area are very good. The relatively flat nature of the towpath, combined with a low density built environment result in radial views over the canal to surrounding areas, including notable views of the characteristic roofscape towards Hanley, the Trent & Mersey, and the green open space. Important viewing platforms are the link bridge and the open space between the forge and museum. Landmark views of the Bedford Locks, Etruria Locks, brick chimneys associated with the Etruria Flint Mill and the link bridge are visible from these vantage points and contribute to the character and appearance of the area. They should be retained. Channelled views from the towpath looking between the Etruria Museum and service yard buildings are highly evocative of times past. Views from the car park towards the canal and outside of the conservation area are marred by the poor visual quality of the public realm within the car park and associated boundary treatments. Generally, the green open space and relatively flat levels adjacent to the canal result in a feeling of openness. However, the passage from the Caldon Canal to Etruria locks, between the existing historic buildings provides a sense of enclosure that contrasts with the general openness of this area.

Views into the conservation area are screened due to modern development and level changes.

Fig. 5: Bedford Locks, set within natural landscape setting

8.7: Detractors, Neutral Areas & Gap Sites

For the most part, the area is well maintained and provides a high quality setting to the canal. However, there are three areas that detract from the overall quality of the area. The most significant detractor is the Etruria Museum car park, occupying what was formerly a wharf inlet to the Caldon Canal. The car park looks forlorn and under-used. In the short to medium term, the public realm elements and surface treatments should be reviewed and upgraded. In the longer term, an aspirational objective would be to re-instate the wharf, with perimeter buildings that would support and enhance the heritage tourism and leisure uses currently offered.

The second area that detracts from Etruria locks is the land adjacent to the western and eastern gables of the Etruria Museum. These areas could be more fully utilised by the Museum, to provide outdoor seating to the café area and children's play facilities for visitors and local residents.

A bin and skip store located to the west of the forge is constructed of inappropriate materials and demeans the cultural value placed on heritage assets at this key location.

8.8: Enhancement Opportunities

Etruria locks has the potential to become a vibrant and exciting place, but additional activities need to be provided for, in order to support the heritage offer and leisure use by visitors and local residents. Given that the use of this area has changed from single use industry to mixed use serving local residents and visitors, the provision of amenities could be enhanced to support the development of daytime and evening activities in this area. An increase in residential density would also help to add vibrancy to this area.

The Jesse Shirley site is currently vacant. There are two options available for this site. Either the industrial uses are retained on the site or the potential for residential land uses could be explored. The retention of the original Jesse Shirley Mill would be required, given the Ancient

Monument status. The continued use of this building as a museum would help to preserve the operational capacity of the original mill and preserve the heritage offer at Etruria Junction. Re-modelling of the rest of the Jesse Shirley site to suit residential land use may be possible, if a bespoke design solution can be arrived at that respects the historic and informal character of Etruria Junction. Any future residential land use would have to present a high quality frontage to the canal and Lower Bedford Street. Retention and conversion of the 1950's warehouse would also be encouraged, along with the boundary wall defining Lower Bedford Street. The organic and informal arrangement in the area that results from the change in levels could be interpreted to create a desirable and sought after location at the heart of the city.

With regard to public realm quality, a more consistent treatment to paving and street furniture should be adopted, to reflect the heritage status of the Etruria Locks. Existing natural stone setts support the heritage offer. Improvements to paved surfaces in the future could incorporate more traditional materials, reflecting local vernacular. The public realm should be reviewed to identify unnecessary fixtures that could be removed and further thought be given to the retrofitted railings on the link bridge. The black and white painted street furniture elements complement the canal and look smart. Architectural lighting to the heritage buildings would enhance the visual quality of the area at night time. Provision for seating would help to encourage greater amenity use of the park by surrounding residents. Perhaps moveable seating would be an appropriate solution, such as deck chairs and hammocks.

Regenerative tree growth should be maintained and managed to frame key views of heritage features in this location from key vantage points. Mowing regimes could incorporate picnic circles defined by longer grass, to provide picnic spaces for families.

The skip and associated bin storage should be re-located to a more discrete location.

On a more aspirational note, re-instatement of the canal arm extending into what is currently now the Etruria Museum car park would enhance further the heritage offer of Etruria locks, and could provide for secure boat moorings.

8.9: Pressures & Threats

The loss of traditional canal-side industry is a concern, as it removes the original context of the canal. Once vacant, industrial sites become a target for theft and anti-social behaviour, and renovation and conversion is often discounted by developers on the grounds of cost. The vacant state of the Jesse Shirley site will attract unsociable behaviour, which will become such an issue with residents that redevelopment at any cost may result. The Jesse Shirley site and Visitor's Centre need to be brought back into use before they fall into a state of disrepair, preferably as a museum and canalside industry, in order to preserve the operational workings of the original mill.

The industrial chimneys situated within the factory complex form a distinctive landmark. The factory buildings should be retained or included within the fabric of future development proposals, to ensure their preservation.

The natural landscape setting to the Caldon canal at Etruria Junction is a valuable asset to the local community and supports the heritage and leisure offer. Future re-development proposals should retain this area of green space, and enhance it further for use by visitors and local residents.

Repairs to the stone sett paving on the Bedford Locks may be required. The stone sett paving should be replaced, in order to retain the historic integrity of this feature.

Fig.6: Stone steps to side of Bedford Locks

8.10: Summary of Special Interest

The Jesse Shirley Mills is an example of an industrial complex that has been extended in piecemeal fashion over time, as business needs have dictated. At the very least, this factory complex should be recorded for historical records and the Scheduled Ancient Monument retained. The 1950's warehouse should also be retained as it provides an anomalous example of built form associated with canal-side industry that has been consciously designed, using architectural principles.

Bedford Locks is the last surviving example of a double staircase arrangement in Staffordshire. It serves to illustrate engineering prowess during the 18th century.

8.11: Recommendations and Proposals

The protection and preservation of the original Jesse Shirley Mill should be a priority, and any proposed modifications and demolitions to the complex as a whole should consider the potential impacts to the original mill. The 1950's warehouse should also be retained, as it forms an interesting architectural addition to the industrial factory complex, referencing the post-war growth period.

The double staircase arrangement of Bedford locks, with associated steps should be protected and preserved, using sympathetic repair methods.

The open access to the water's edge from the canal edge should be retained, in order to preserve the spatial experience of the pedestrian and narrowboat user. The informal

landscape setting to the canal should be retained and enhanced, in order to support the heritage and leisure offer for visitors and local residents.

9. SHELTON

Fig. 7: Canalside warehouse, off Pyenest Street

9.1 Introduction

Shelton has been an active and jostling industrial community in the past. The decline in industry has impacted significantly on this area, with many of the remaining industrial buildings left in a state of dereliction. Much of the terraced housing associated with this area has been demolished to make way for new build properties, but some pockets of worker's housing remains intact. Occasional incidences of heritage led regeneration have taken place on isolated properties, but the main driver for change in this section is demolition and new build. The historic character of Shelton is significantly under threat.

9.2 Archaeology

Even thoug h the main a ncient Hanle y to St oke road crosses the study a rea, in dustrial development along this stretch of the canal appears to have been relatively slow.

From the 1780s the south bank of the canal was occupied on the west side of Stoke Road by Shelton Hall and o n the east by Cauldon Place Pottery. Charle s and Eph raim Chatterley, "eminent and opulent manufacturers", built Shelton Hall in landsca ped grounds in 1782. The Cauldon Place Pottery was established by Job Ridgway. High quality ware was produced and his son John Ridg way acquire d the titl e 'Potter to Queen Victoria'. The Rid gways lived in a grand house in front of the works with land scaped groun ds runni ng to the canal edge. Both Shelton Hall and the Ridg way's house w ere described in 184 3 as, "elegant to wn houses o r suburban villas," with "tasteful gardens and pleasure grounds attached," (Ward 1843, 386).

The g rounds of Shelton Hall were re duced by 19 00 b ut priva te housin g a nd g ardens maintained a green edge to the canal. Shelton Hall itself was demolished in 1959 an d replaced by a training centre.

Expansion of the potworks along the canal edge eventually blocked off this green element. A Technical/Sixth Form College has occupied the site of the former Cauldon Place Pottery since the 1940s. Due to subsidence, the site now lies several metres below the canal itself.

On the north bank some terraced housing ran along Shearer Street by the 1830s but otherwise the area was largely free of buildings.

The Wellesley Street, Chatham St, Norfolk St area was developed as a small housing estate from the 1850s. This had originally been Pinfold Meadow, one of many agricultural fields in Shelton in the late 18th century. The land was acquired by John Ridgway (of the Cauldon Place Pottery) and laid out as a speculative housing venture in the 1850s. Following Ridgway's death in 1860 the architect Robert Scrivener oversaw completion of the estate, even supplying bricks from his own brickworks by the canal on Norfolk Street.

By the 1870s wharves were established along the north bank of the canal and Howard Place was fully developed with housing. Two new pottery works were present on Norfolk St and at Bedford Road (the Bedford Works). The Pyenest Street and Lomas Street areas were developed with housing, but some agricultural land remained in the north-east corner of the study area, not built over until the early 20th century.

9.3 Historic and Existing Land Uses and Function

Historically, land uses adjacent to the Caldon Canal in the Shelton area were industrial, with the canal located at the centre, enabling the transportation of goods and raw materials. Residential accommodation housing industrial workers and families was also associated with the canal, as families located close to their place of employment. For the most part of the Shelton length, housing is removed from the canal edge, to make maximum use of transport connections by industry.

With the decline of the manufacturing industries in Stoke-on-Trent, only a small portion of industrial land use remains. The reclamation of former industrial areas has resulted in a mix of uses. Brownfield housing development has replaced former industrial land use, and is currently proposed to replace existing derelict warehouses flanking the canal. The sixth form college now provides educational facilities and white collar employment opportunities in place of former industry and employment. A local health centre occupies a prominent corner position at the junction of the Caldon Canal and Howard Place. The canal itself provides leisure boating opportunities, whilst the towpath facilitates off road walking and cycling routes. Recreational angling also takes place. Current land uses in this area can be described as mixed.

9.4 Character of the Built Form

Listed and Unlisted Buildings of Importance

The North Staffordshire Conurbation Assessment of Historical Significance places a status of definite value to properties on Wellesley Street. The properties possess high townscape value provided by groups of well detailed historic buildings (usually mid-to-late 19th century housing). The surrounding houses fronting onto Harcourt Street, Chamberlain Street and Salisbury Street have been identified as having general value, demonstrating streets of medium quality, with 19th or early 20th century buildings, showing cohesive properties.

The terraced form, providing efficiently compact accommodation, is ubiquitous to industrial development. Laid to a geometric street grid, the terraced form is characteristically austere in style, with a strong sense of enclosure within the street. In this area, the standard of detailing rises considerably above that, say, in the cotton belt from Merseyside to the Lancashire Pennines.

Terraced properties fronting onto the main thoroughfare of Wellesley Street present a strong public frontage through the use of two and a half storey massing and decorative detailing. These houses were built to accommodate the managers and designers of local potteries, and

consequently are more generous in their dimensions, architectural quality and decoration. The sense of grandeur is enhanced through the positioning of paired recessed entrances within a single arched porch, in order to give an impression of double fronted housing.

On properties positioned between Harcourt Street and Chamberlain Street, paired italianate windows above the pedimented porch further assist in 'keeping up appearances'. Richly decorative glazed ceramic tiles applied to the internal walls of the recess completes the experience of the approach to the front door. A walled setback from the pavement further articulates the enhanced status of properties within Wellesley Street, whilst defining the private realm of the property. The eaves line is interrupted by a series of small roof gables, the ridge of which is decorated with perforated ceramic ridge tiles, with a finial to the gable apex. High quality terracotta brickwork has been used to the front and side elevations, with lower quality brindle bricks reserved for the rear of these properties. Angled bay windows to the ground and first floors add a strong and consistent sense of relief to this elevation. The original windows have been replaced with PVC windows, but the aperture dimensions suggest that they would have been sash windows, constructed of timber. Moulded stone dressings to the heads and sills of the windows further enhance the sense of relief to the elevation, with a crenellated parapet detail. Decorative terracotta ceramic plaques add further detail to the front elevation. Italianate windows can be found on the gable elevations, with corbel detailing supporting the end chimney.

Fig. 8: Elevational detailing on No. 35 Harcourt Street

The terraced properties fronting onto Harcourt Street, and Chamberlain Street are understated by comparison to the Wellesley Street properties, but the architectural language of Wellesley Street is utilised in a modified form. The heights of the terraces are more modest, employing two storeys instead of two and a half. Brindled brick has been used to construct the side and rear boundaries, but high quality terracotta facing brickwork has been used to front elevations on public view, with matching brick front boundary walls. Staggered pitched roofs are finished with clay tiles. Chimneys punctuate the skyline and decorative dentils mark the staggered eaves line. Square bay windows and paired front doors are set within a plain tiled projecting roof to the ground floor, extending across two adjoining properties. Again, this gives the perception of double fronted housing, with connotations of enhanced social status.

Much of the original fenestration detailing within the terraces has been altered over time, with PVC windows replacing timber sash windows. However, an original frontage can still be found on No. 35 Harcourt Street. Moulded stone cills and lintels to the upper floor windows house two timber sash windows, separated by a timber mullion. Stained glass panels are applied to casement windows at the top of the square bay window. The bay window cill and gate pier coping stone is constructed of stone, as are the moulded dressings and consoles that frame the front doors. Chamferred clay copers finish the front boundary walls.

Ceramic tiles set into the building elevations provide street signage.

Notably, given the decorative detailing and perception of better quality housing in the area, the original layout is unusual, in that the original street layout remained open to the canal. Terraced housing traditionally turned away from the canal as it was considered to be an undesirable and unpleasant place. Infill has taken place at the southern end of Harcourt Street at a later date, but the original arrangement of buildings on Chamberlain Street has been retained in part.

The former wharf keeper's cottage, 25 Howard Place, is designated as a building of special local interest. It comprises a two storey brick house with plain tiled roof. Panelled sash windows set within locally manufactured brindle brick elevations, with segmented brick arches add to the character and charm of Howard's Place.

United Christian Broadcasting/Teen Challenge Centre, opposite the former lock keeper's cottage at Howard Place is two/three storeys in height and constructed predominantly of red brick with contrasting blue brick detailing. The main frontage of conservation interest occurs on Stoke Road. A central gable set within a pitched roof frames the central feature window. Three bays on either side of the feature window complete the main front elevation. Original roof tiles have been replaced with concrete tiles. All of the windows to the front elevation have stone cills and shallow pointed brick arches. The arches to the upper storey windows appear to support structural loading, with a stone keystone defining the central point. Five out of six of the lower storey windows have decorative brick arches, but the main structural loading is supported by stone lintels. The remaining lower storey window is framed by a brick pointed arch, which deviates from the established proportion and symmetry on this elevation. Timber casement windows are evident on this location.

The frontage facing onto Caldonia Road and wrapping around onto Stoke Road differs in style, displaying different proportions to the main frontage on Stoke Road. It is likely that the building has been extended over time, in a piecemeal fashion as business has expanded, using a different architectural language, or that the Caledonia Road frontage has been modified.

The canalside warehouse, off Pyenest Street, comprises a split level brick building with plain tiled roof. A single storey elevation faces onto Pyenest Street, although previously, this elevation would have been screened by buildings fronting onto Pyenest Street, with an enclosed courtyard separating the two buildings. A two storey elevation faces onto the Caldon Canal, displaying stone cills and segmented brick arches to upper storey windows. Entrance apertures for loading and unloading onto narrowboats from the warehouse are located on the lower storey, with segmented brick arch and cills. All apertures facing onto the

canal have been bricked up, leaving little window detailing, but a timber double door is still visible. The 1880 plans show this site as an open air wharf, but over time, piecemeal development has taken place, resulting in a strong built edge to the Caldon Canal. The 1997 canal management strategy document mentions one surviving chimney pot, but there is no evidence of this remaining in 2012.

No. 75 Shelton New road fronts onto Shelton New road. This building formed the original main building to the site, with outbuildings located adjacent to the canal and along the southern boundary. Over time, piecemeal development has taken place on the site, with partial removal of outbuildings to the southern boundary, infill to the western boundary behind the main house, with partial demolition of work sheds to the southern boundary, and rebuild of work sheds to the southern boundary. This has resulted in a semi-enclosed courtyard.

The main property has been in situ since 1880, and remains relatively intact. It has always performed the function of presenting a public face and proportionality has informed the architectural design. It has a pitched clay tile roof with overhanging eaves that provides shelter at the front entrance. It is of brick construction, painted cream. There are three bays to the main elevation fronting onto Shelton New Road. The window and door entablatures show the greatest projection within the elevation, with moulded stone cornices, supported by console brackets. The sash windows are constructed of timber, with large panes of glass.

The outbuildings are constructed of brick construction, again painted cream. The lesser stature of the outbuildings is articulated through the lower roof pitch (predominantly single storey, with some two storey massing to the rear of the site), simple detailing and lack of proportion. Windows and doors are arranged in an adhoc fashion that relates to the functions contained within the building.

Fig. 9: No. 75 Shelton New Road

The 1880 plans show the public house on the corner of Shearer Street and Shelton New Road, located at the apex of a terraced block arrangement. With the exception of three terraced properties adjoining the public house, the terraced housing on the block has recently been demolished. Consequently, much of the context of the public house has been removed,

but the distinctive general arrangement of the public house at the junction of Shearer Street and Shelton New Road still forms a distinctive feature within the urban environment.

The pitch line of the single clay tiled pitched roof decreases in height, as the corner apex reduces the span of the pitch. A single chimney can be seen to the public house roof line, but the remaining chimneys to the terraced houses fronting onto Shelton New Road areregularly spaced. The original skyline in this area would have been comprised of pitched roofs with regularly spaced chimneys. Decorative dentils add interest to the eaves line. The buildings are constructed of red brick. Moulded stone dressings adorn the window and door apertures. Door entrances are located within both the Shearer Street and Shelton New Road elevations, but the main feature entrance occurs at the corner of the building, with stone steps leading into a wide entrance, flanked by windows on either side.

Two storey terraced properties within Davis Street, Castlefield Street and Lomas Street are unremarkable in their detailing. The block has been included within the conservation area boundary because of the unusual historic setting of worker's housing adjacent to the canal. Unpleasant views of the canal from the houses were mitigated for by utilising the change in levels to screen views from lower storey windows.

Fig. 10: Worker's Terraced Housing on the lower level of Davis Street, overlooking the canal

Architectural Character, Materials, Colours and Textures

The character of development in the Shelton area is organic, resulting from piecemeal development over time as business and housing needs changed and developed. The buildings are predominantly constructed of red brick and clay roof tiles. The brindle brick work on industrial warehouses and rear properties is highly textured. It is likely that the fenestration detailing of housing in the Wellesley Street area would have been highly coloured, using characteristic heritage colours of duck egg blue, teal, and green, set against the backdrop of terracotta bricks. Stained glass windows would have provided an additional array of colouring.

Fig. 11: Rear view of Lomas Street properties from the Caldon Canal

Built Form & Massing

The block form arrangement to the canal edge is organic. . For the most part, properties present a public face away from the canal, resulting in rear boundary walls, rear building facades, yards and car parks adjoining the canal. Where the street grid form is evident, (Wellesley Street and Davis Street areas) it can be described as a rectangular street grid arrangement, with terraced properties enclosing the street and channelling views into and out of the canal conservation area.

The scale and massing of the built environment is predominantly two-storey housing and industrial buildings, of relatively small floor plate. The varied building heights within the 6th form college block range from one to three storeys, and possess large floor plates. These more recently constructed buildings depart from the general domestic character of the built form and massing within the area. However, the significant level change between the canal and the sixth form college reduces the impact of this change in the character of the built form.

Style

The style of the built environment within the conservation area at Shelton can be described as austere and functional for the most part, but the three storey terraced form to Wellesley Street possesses a decorative style.

Groundscape & Public Realm

Access to the canal from the surrounding street network is restricted. Access is afforded from the Bedford Street and Shearer Street bridges, but other than these two access points, there is no direct access to the canal conservation area within the Shelton stretch of the Caldon Canal. The lack of access impairs the potential of the canal corridor to serve as a sustainable transport corridor for pedestrians and cyclists.

Mature tree planting and grassed verges significantly enhance the quality of the canal-side setting. However, areas of regenerative tree planting in the Wellesley Street area partially obscure views of character towards neighbouring residential streets.

Paving materials are mixed, including resin bound gravel, clay paviours, stone setts, concrete and tarmac.

Because of the linear nature of the canal corridor, boundary treatments make an important contribution to the visual quality of the conservation area. Boundary treatments within the conservation area at Shelton are inconsistent in design and are poor in quality. Typical boundary treatments include traditional stone walling, red brick and Staffordshire blue brick walling, steel palisade fencing, plywood hoarding and steel railings. Barbed fencing is often situated to the top of boundaries, as a crime deterrent. The accumulation of boundary treatments looks unsightly and significantly detracts from the character of the conservation area. However, Staffordshire blue copers located to the top of walling adjacent to Lomas Street add to the quality and character of the conservation area in Shelton.

Lighting fixtures are sparse, suggesting that night time lighting is minimal. The provision for seating opportunities is limited in this area due to the narrow width of the towpath. Consequently, seating is restricted to the area outside of the health centre. Notably, this area is litter free.

9.5 Ecology and Landscape Designations

The Caldon Canal is a designated wildlife corridor, of value for wildlife movement through the city. Tree cover can be found in some instances next to the canal which will be of value for foraging bats. Therefore, tree cover should be retained, enhanced or replaced and sensitive lighting of future canalside developments in these locations will be required.

Emergent vegetation, including reed and other grasses, are occasionally found on this stretch. They provide nesting sites for waterfowl and habitat for a variety of other wildlife and should be retained and enhanced through careful management of the canal edge.

Invasive species can be found on this stretch, including Japanese Knotweed and Giant Hogweed, and should be appropriately eradicated, without damaging the canalside ecology.

9.6 Topography, Views & Enclosure

The topography slopes down from the north and north east to the south and south west of the Caldon Canal. The canal is subsequently elevated above the surrounding urban environment to the towpath side.

There are three long distance views afforded from the canal in Shelton, at vantage points afforded on the Bedford and Shearer Street bridges, looking towards Cliff Vale and further afield to Newcastle-under-Lyme and from the canal looking across the Caldon Campus towards Shelton Park.

Views within the Lomas Street and Pyenest Street areas are for the most part channelled within the confines of the canal, due to the enclosure afforded by surrounding buildings, mature trees and walls. Long distance views from the canal occur where the street grid abuts the canal at a perpendicular angle. Views in the Caldon campus area are less channelled, because of the fragmentation of the built environment, but are still contained by the surrounding built environment.

Good quality historic townscape views can be seen from the canal towards Davis Street, Howard Place (United Christian Broadcasting/Teen Challenge Centre, former Wharf Keeper's Cottage and associated canal locks) and the Wellesley Street area. The street grid of the Wellesley Street area, combined with the rise of topography affords characterful views from the canal to the front and rear of traditional terraced properties on Chamberlain Street. The potential exists for a fourth historic townscape view from Shearer Street Bridge (including

Regent College and Shelton Public House), but the derelict state of the industrial site to the north of Shearer Street and the demolished clearance area to the east of the Public House reduce the impact of this view. Shelton Public House still forms a signicant local landmark, although much of the context has been removed.

Fig. 12: The Wharf Keeper's Cottage, as viewed from the canal

Other notable views from the conservation area include the traditional terraced frontage of Norfolk Street and views of Hanley Park and Bedford Locks from the adjacent bridge apertures. The elevated nature of the Caldon canal and the arrangement of college buildings combines to afford glimpsed views of Shelton Park from the canal.

Views that detract from the quality of the conservation area occur from the canal overlooking the Caldon College Campus (car parking and site dereliction), poor quality housing adjacent to the Canal on Shearer Street and the derelict industrial site on the northern side of Shearer Street.

Views into the conservation area are mostly screened due to level changes, boundary treatments, and properties facing away from the canal conservation area. However, views from the road occur at Shearer Street (looking towards the canal and Regent College), as are views from Stoke Road (towards Howard Place).

9.7 Detractors, Neutral Areas & Gap Sites

There are two significant detractor sites that impact on the character of the Shelton stretch of the Caldon canal. The fragmentation of the built environment associated with the Caldon Campus College, combined with the derelict sites adjacent to Norfolk street impact negatively on the overall visual quality of the conservation area. Other detractor sites include the derelict industrial works adjacent to Bedford Street and the canal, and the vacant site between the canal and Pyenest Street, next to the canalside warehouse. The derelict site of the former Caledonia Mills is not visible from the canal due to the temporary hoarding, and can be described as a neutral site, further reinforced by the absence of any buildings.

Unsightly boundary treatments further detract from the historic character of the canal.

It is interesting to note that most of the identified detractors can be described as derelict and vacant plots. The remaining historic built environment makes a significant contribution to forming the character of the Caldon canal conservation area within Shelton. Encouraging re-sue of these sites would help to improve the visual quality of the area, through private maintenance programmes.

9.8 Enhancement and Development Opportunities

Residential land use should be promoted in the Shelton area, with mixed use nodes at key access points to the canal from the surrounding area. Future developments should align with enhancements to Hanley Park and the educational new build development for Stoke-on-Trent College, emphasising sustainable transport links. Renovation and re-use of vacant buildings would bring increased activity and natural surveillance to this area as a short term measure. Development of derelict brownfield sites should sympathetically repair the fragmented built environment and help to reinforce the urban character of the Caldon Canal within Shelton.

Development should incorporate sustainable urban drainage that makes use of the canal as an existing urban water channel and celebrates the waterside location. It should aim to create linkages to the canal, to improve access and encourage use of the conservation area as an off road sustainable transport route. The historic layout of the existing street grid in the Davis Street and Wellersley Street areas could provide a useful starting point for the layout of future development.

With regard to public realm quality, a more consistent treatment to paving and boundary treatments should be adopted, to reinforce the historic character of the canal. The condition of boundary treatments should be assessed and improvements made, in order to enhance the canal and improve the visual quality.

Regenerative tree growth should be maintained and managed to frame key views of historic townscapes from key vantage points.

9.9 Pressures & Threats

Further neglect of the existing historic assets may result in further demolition, increasing the area of vacant sites adjacent to the canal and eroding the historic urban fabric further.

Due to the depressed housing market, there will be a tendency to propose high density design proposals in the Shelton area. Whilst there is an argument to say that high density development in the inner urban core reduces fuel dependency through reduced transport costs, there may be a danger of overdevelopment that is so out of scale with the historic built environment that it detracts from the historic character. Future design proposals should be mindful of the historic context and aim to complement the existing urban form. Reduced asking prices for residential properties in a depressed housing market may result in poor design and build quality for residential schemes. Particular care should be taken to ensure that the quality of the built environment adjacent to the canal and associated historic assets is of sufficiently high quality.

Increased requirements for car parking in the inner urban core may result in the demolition of existing historic assets for conversion for car parking. Such actions would significantly erode the historic character of the canal further. Where additional parking is absolutely necessary, views of car parking from the canal should be screened from view.

9.10 Summary of Special Interest

The surviving built fabric of the Shelton section is still capable of telling the story of the function of the canals during the industrial revolution in Britain. The design of the locks resolved the issue of level changes in this area, illustrating the confidence and prowess of

19th century engineers, and the lock keeper's cottage further supports the historical narrative of the canal locks.

The remaining historic buildings are typical of their period and are constructed of locally manufactured materials.

The layout of housing to a geometric grid adjacent to the factories is also worthy of note. The factories and mills attracted workers from further afield and the potbank and mill owners recognised the need to build high density housing for workers that was within walking distance of their factories. The decorative character of the Wellesley Street housing testifies to the ambitions of John Ridgeway, who took the opportunity of promoting his products through the creation of residential housing and created a lasting legacy. The difference in architectural design between the Wellesley Street properties and those properties on Chamberlain Street and Harcourt Street reinforces the hierarchical structure that would have prevailed in the factories.

Historic boundary treatments and paving within the Shelton area further testifies to the use of readily available materials that were robust enough to support heavy duty industry.

9.11 Recommendations and Proposals

Historic assets should be protected, preserved and re-used and the historic urban form should be repaired where it has become fragmented.

The re-development of former industrial sites should be encouraged, to suit modern day needs and encourage use of the canal as a sustainable transport route, but development proposals should respect and show reference to the existing historic character of the area. The scale of new development should aim to complement and frame existing historic assets, rather than dominate.

10. HANLEY PARK

The Caldon Canal runs through Hanley Park, which is included within the Register of Parks and Gardens of Special Historic Interest in England (grade II listed). The park is also designated as a conservation area. The Hanley Park conservation area is due for review this year.

The construction of the Caldon Canal precedes the construction of the Park. However, the canal influenced the design of the park to a significant degree, and the lake is fed from the canal. In this manner, the two have become intricately connected. For this reason, we have decided not to provide an appraisal of the Caldon Canal that runs through Hanley Park within this document, as a full appraisal will be included within the Hanley Park conservation area appraisal.

11. CITY WATERSIDE (HANLEY SOUTH)

Fig. 13: Former elevation of Johnson's Imperial Pottery, opposite Trent Bathrooms

11.1: Introduction

Once an industrial heartland of Stoke-on-Trent, Hanley South has seen much change in recent years. The decline of industry has clearly had an impact on the area. Due to a declining housing market, the area has been subject to a renewal programme, and much of the historic fabric of this area has been demolished to clear the way for new development. The historic character has been eroded as a result, but isolated pockets of the historic urban fabric still remain. The recently renovated Eastwood Pottery is still operational under the stewardship of Emma Bridgewater and is highly evocative of times past. Other traditional industries also remain in this area, such as Endeka Ceramics. New build residential development is intended to replace the recently cleared sites, but is yet to be brought forward. Consequently, this area can be described as being an area in transition.

11.2: History & Archaeology

The study area adjacent to Hanley Park continues to demonstrate the industrial character that it had attained by the mid 19th century. Although some dwellings were present by the 1860s, notably along Lichfield Street (originally Fenton Road), the area essentially formed a band of industry, separating Hanley Park from the largely residential area around Joiners Square.

Hargreaves' map of 1832 illustrates the nature of early development along this stretch of the canal. A small number of buildings are shown on the canal to the north-west of Joiners Square and, although none are identified, they may include a brick works (Mousecroft) and possibly a mill (Westwood Mill) that are depicted on later maps. A colliery is also shown a short distance to the east of the Caldon in 1832, apparently connected to the waterway by a light rail link.

By 1866, Westwood Mills (PRN 30649) occupied two buildings positioned to the north and south of the canal. The northernmost of these buildings may represent the structure shown on Hargreaves' map, although this is uncertain. An account of the mill in the 1960s states that one of the buildings featured a date stone identifying its year of construction as 1848. This description, however, probably relates to the building on the southern side of the canal, which was the only structure still in use at the time. The mill continued to operate on a split site until at least 1880, at which point it was grinding flint and stone. The 1900 Ordnance Survey (OS)

edition again depicts the two factories flanking the canal, but only the southernmost of the works is identified as a flint mill. By 1924, the factory on the northern side of the canal had been reconfigured and is recorded as the Eastwood Works, producer of sanitary earthenware; the southern complex was still in operation as a flint and stone mill at this time. The works on the southern bank of the canal remained in operation until at least the late 1960s.

Two other flint and stone milling enterprises, the New Mill and Central Mill, were also in operation on the eastern side of the canal by 1924. Both of these sites are still active.

The Trent Works (PRN 30551) was established on the eastern side of the Caldon (just to the south of Westwood Mill) in 1859 by Stanway, Horne and Adams. The works specialised in the production of cheap ornamental Parian, but also manufactured stonewares and lustre wares for the domestic and export markets. The factory operated until at least 1937.

The aforementioned Eastwood Works (PRN 30651) comprised two sites to either side of Clifford Street. By 1950 the southern factory had expanded to encompass the adjacent Mousecroft brick works, first shown on Hargreaves' map of 1832. The Eastwood Works persisted into the latter half of the 20th century, but has now been demolished; the southern factory site is now occupied by residential properties.

An elongated enclosure containing a potter's crate works (PRN 30425) was present on the western side of the canal by 1880. The works comprised two buildings at the northern end of the yard, with a sub-rectangular timber pond located to the south. Although still extant in 1890, the works had gone by 1900. An archaeological investigation on the former site of the works in 2008 found no evidence of any structures or features related to the crate yard.

In 1894 Hanley Borough established the first electricity works in the Potteries on the western bank of the Caldon. This was accessed from Bethesda Road, which had been created specifically for the works. In 1910, the works passed to the new county borough of Stoke, which had expanded the works significantly by 1924. The station was linked to the national grid in 1930 and had been doubled in size by 1937, incorporating the site of the former crate works. The station was demolished in 1975 and replaced with the present tower blocks. A small electricity sub-station and power-distribution transformer had been constructed in the northern part of the former works by 1994.

The area situated on the southern fringe of the Hanley (now known as City Waterside) remained comparably undeveloped until the mid 19th century. Only one potworks is shown within the area on Allbut's map of 1802 (no. 85 – the factory of William Baddeley) and even by 1832, just two potteries (what would later be known as the Waterloo/Nelson Pottery and the Eastwood Works), a brickworks, the Ivy House Paper Mill and a colliery had been established on or in the vicinity of the Caldon Canal. The greatest concentration of development at this time was in the Joiner's Square area, which comprised a mixture of residential and industrial buildings. Elsewhere in this period residential development within the area was confined to Nelson Place. During the second half of the 19th century, the study area was characterised both by industrial development along the banks of the canal and an increase in the number of residential properties, typically arranged along newly-established roads. This latter trait formed part of the gradual expansion of the residential area situated to the north east of the town centre. By the beginning of the 20th century the study area displayed the same juxtaposition of industrial and residential buildings typical of other areas of the city. The area's character remained relative unchanged until the early 21st century, when several of the industrial sites which flanked the canal closed, were subsequently demolished and, in some cases, redeveloped. Wholesale clearance of 19th-century housing stock was also undertaken during this period, the former locations of which remain largely undeveloped. Within the study area, several significant factory sites survive either largely intact or in part.

11.3: Historic and Existing Land Uses

Disused brownfield land now occupies much of the City Waterside area, although traditional ceramics industries still remain. This is due to national economic circumstances and changes in national policy in respect of priority sites for re-development. Derelict industrial land has

been adapted to meet demand for modern housing. To the south of the Eastwood Works, former industrial warehouses and factories have been successfully converted to residential use. Allotments have been established on former coalfield sites near to Hanley Park.

11.4: Character of the Built Form

Listed and Unlisted Buildings of Importance

The buildings of the New Flint and Stone Mill on the eastern side of the canal have been modified to suit more modern methods of industrial production, but the shells of the original buildings survive, demonstrating building construction methods in the early part of the 20th century that resulted in a utilitarian style. Locally produced brindle bricks and clay tiles were locally manufactured products, and the construction process made use of these easily available materials. The buildings of the New Flint & Stone Mill adjacent to the canal are constructed of local brick with the original clay tile roof. The external wall facing onto the canal is noticeable because it follows the line of the towpath. The brickwork shows how the development has been extended over time. Textural changes in the brick work show the original door aperture onto the canal towpath and original brick boundary wall. The brick boundary then became incorporated into an extension that now presents as a single building with a double pitched roof.

Fig. 14: Internal courtyard and building elevations within Eastwood Pottery Complex

A potworks was established on the Eastwood Works site by 1802. By 1857 (and possibly by 1832) a pair of flint kilns had been established on site and remained until at least 1878. The pottery specialized in the production of white granite for the export trade until c.1889. From 1889 the Eastwood Works was operated by the partnership of James and George Meakin. The firm was a significant producer of earthenware, but specialized in the manufacture of white granite. The manufactory continued to operate under the trade name J. & G. Meakin until 1958, when it was acquired by the Johnson Brothers. The works has been occupied since 1997 by the Emma Bridgewater Pottery. The extant three-storey red brick manufactory is a functional but imposing example of a late 19th-century potworks, the design of which incorporates changes wrought by the 1891 and 1895 Factory and Working Acts, such as iron

beams and columns, larger rooms with bigger windows and larger doors that afforded better space, light and ventilation. External elevations of the standing buildings were recorded in 1984. The building is locally listed, having special local interest. The main range has 37 bays and two storeys with an additional lower storey at the canal end. Within the Lichfield Street elevation, there is a pedimented central bay and the elevation is ended by gabled wings. The architectural detailing to these building accents show moulded dressings, including pilasters, to the central bays. Triangular stone pediments top the windows in the end bays. The windows vary in height, reflecting the slope of Lichfield Street. The extensive length of this elevation makes it an important and positive landmark. A canopy overhangs the canal frontage, with original stone sett details between the main buildings. Flat arched heads are found to the windows on the Lichfield Street frontage, but elsewhere on the site, cambered arched heads are more commonly used. The factory complex is constructed predominantly of red brick with plain tiled roofs, although one building regrettably now has a metal cladding roof. Windows display small panes with timber glazing bars.

Fig. 15: Oval shaped window with stone surround and metal crittal windows

The Johnson Brothers Office Building is situated to the east of the Eastwood potworks, fronting the junction of Pelham Street and Eastwood Road. This is an example of an early 20th century building, with red brick walls topped by a raised stone verge. Two oval shaped windows with stone surrounds are of particular interest. The associated buildings to the canal frontage are of little architectural merit, but provide an appropriate context to the office building and contribute to the strong sense of enclosure to the canal.

The Joiner's Square Works is first mentioned in a trade directory of 1862 under the proprietorship of W. Wentworth, Buller & Mugford, patent stilt and spur manufacturers. By 1867 the firm traded as W.W. Buller & Co., by 1893 as Buller, Jobson & Co., and by 1907 as Bullers Ltd., patentee manufacturer of kiln furniture, mortars and pestles, door furniture, china and earthenware, brass founders' china and insulators for telegraphs, railways and tramways. The firm specialized in electrical porcelain by 1921 and began trading as Amalgamated Insulators in 1959. The works eventually closed in 1972 (Allied Insulators 2005). Elements of the factory survive to the present day as part of a housing development. These include a Grade II listed brick bottle oven, surrounded by two- and three-storey brick buildings with plain

tiled roofs. The adjoining buildings feature window apertures with cambered brick heads, fenestrated with timber units with small panelled glazing. To the south east, fronting onto Hampton Street is a three-storey, red-brick range with plain tiled roof. The building's principal elevation features fifteen bays and also includes the original cart entrances (although these have been modified in recent years). Most of the windows in the front and rear elevations have cambered brick heads, although those within the third storey are flat. Timber frames with small panelled glazing feature in most apertures, although some on the ground-floor of the Hampton Street elevation have iron grilles. All window apertures within the south-west-facing elevation have cambered brick heads, but have been bricked up. Stepped brick detailing lines the eaves.

The Old George and Dragon Public House, situated on the opposite side of Hampton Street is a two-storey, red-brick building, with a plain tiled roof. Three tall chimneys punctuate the skyline. Decorative dentils mark the eaves line. The original entrances are marked with ornate door hoods. Console brackets support a tablature and cornice, with the pediment situated above. The corner entrance has now been converted to a window. A mosaic of George and the Dragon can be found above the former corner entrance. Turquoise ceramic detailing adorns the pediment on the northern elevation, containing the words 'Parkers Celebrated Ales'.

Joiners Square County Primary School is constructed of brick with a plain tiled roof. Five bays are presented to Hazlehurst Street and also to Franklyn Street. Large, round headed windows are used in the wings, with moulded brick heads and various sized and shaped panes. Timber window frames contain small panelled glazing. Brick and moulded stone pediments top the central bays. A plaque to the west elevation contains the words 'Eastwood Vale Schools – Hanley School Board – Established 1879'. Stone setts form the surface of the adjacent entry.

Fig. 16: Hazlehurst elevation of Joiner's Square County Primary School

Nelson Pottery had become established on the northern bank of the Caldon Canal by 1832. By 1866 the factory was known as the Waterloo Pottery and operated as a china works. Within twelve years the factory had switched to earthenware production; the manufacture of

china having relocated to new premises (also known as the Waterloo Pottery) on the southern side of the canal. The works had been substantially expanded to the west by 1900 and further development of the factory took place in the subsequent 25 years. The factory continued to produce earthenwares, but by 1924 was known as the Nelson Pottery and operated as a separate concern to the Waterloo Pottery. Although a new range was built in the eastern half of the works in the second half of the 20th century, the factory buildings fronting onto Botteslow Street had been demolished by the mid 1990s. The pottery's occupants included W. Stubbs, Thomas Booth & Son, Homes & Plant, Pugh & Glover, Beech & Morgan (1880-82) and G & B Burton. Elijah Cotton is listed at the works in 1885, although other sources indicate he did not occupy the factory until 1889. The firm of Elijah Cotton Ltd. remained at the works until the 1980s. The factory is presently derelict and has recently been damaged by fire. The frontage facing onto Commercial Road is two storeys in height, constructed of red brick with blue brick detailing with a plain tiled roof. Stone plaques on the corner elevation contain the words 'Nelson Pottery' and 'Established 1758'. Buildings to the canal frontage are constructed of red brick with plain tiled roofs. The canal-side elevations show cambered brick heads to the ground floor windows. Part of the elevation extends down below water level.

Fig. 17: Ivy House Paper Mill and chimney, facing onto Commercial Road

The Ivy House Paper Mill was founded in 1827 by G. H. Foudrinier, although the site was first developed as a corn mill in the late 18th century. One element of the mill's output was tissue paper for the local pottery industry. Foudrinier was declared bankrupt in 1854 and, in the following year, the works was taken over by Thomas Brittain. In 1890, Brittain's grandson, Thomas Arthur Brittain and two other members of the family purchased a paper mill at Cheddleton and amalgamated this with the Ivy House works. Paper making ceased at Ivy House in c.1906 when the works was substantially rebuilt and used solely for paper finishing and coating. By the 1950s, the firm had acquired the neighbouring site of the Dresden Mills and retained some of its buildings. Tullis Russell and Co. took over the site in the 1970s and operated until 2006. Most of the works (with the exception of the building fronting onto Commercial Road and the chimney behind it) were demolished in 2007/8. A photographic survey of the factory complex was undertaken by Scott Wilson in 2007, prior to demolition works on site. The paper mill comprises a three storey front elevation with nine bays. Bays 1 and 9 show different architectural detailing to the other bays, with smaller windows set within a segmented recessed arch, acting like a bookend. Windows to the first and second floors are constructed of timber and have small panes. A tall circular chimney within the site creates a landmark feature, but the building associated with the chimney that presented a frontage onto the canal has been demolished.

The Trent Sanitary Works, built in 1896, was a substantial works that formed one of a cluster of factories (the Imperial Pottery, Hanley Pottery and Charles Street works were the others) owned by the Johnson Brothers in Hanley. The firm continued to produce sanitary wares at the site until 1968, when the Johnson Brothers became part of the Wedgwood group. Production persisted until 2004, when the works closed. Archaeological building recording was carried out at the factory prior to its demolition in 2005 and excavation works were conducted following the removal of buildings on site. Only the locally-listed section of the factory's Eastwood Road range and two Grade II listed calcining kilns were spared from demolition. Late Victorian in style, this range is two storeys in height, constructed of red brick with a plain tiled roof and moulded stone dressings. There is a classical influence within the design of the range. A central five bay section lies between slightly recessed wings. Stone entablature above the five central bays includes the words 'Johnson Brothers Hanley Limited Sanitary Works Established 1896'. A balustraded parapet is situated above the entablature. At ground floor are round arched head windows. The side wings have stone pediments to the windows, gables and door. The kilns were constructed between 1924 and 1937 as part of the factory's expansion of its flint preparation facilities.

Fig. 18: Remaining Trent Bathrooms Building, facing onto Eastwood Road

Architectural Character, Materials, Colours and Textures

The predominant style of buildings is utilitarian in character. The western façade of the Bridgewater Pottery is notable for its long range and austerity, reflecting the authority and power of the potbank owners at the time of construction.

Buildings are constructed predominantly of red brick, with decorative stone and brick details in instances. The main colours are brick red and grey, with accents of cream.

Built Form & Massing

The built form within City Waterside can be described as urban. Buildings range in scale and massing from single storey to three storey. Historic bottle ovens and towers punctuate the

skyline, and provide a distinctive feature because of their sinuous form and height. The scale and massing of the built environment is varied and diverse. Within the industrial areas, the roofscape and gable orientations vary with the different heights between the different factories and warehouses.

Due to the high density of industrial uses, the historic building line to the northern and southern edge of the canal in this area followed the alignment of the canal. This allowed for the compact use of the area for industry. The drop in topography lowered the scale and massing of buildings to the southern edge when compared to the industrial buildings situated on the more elevated northern bank and reduced the impact of extensive industrial elevations facing onto the canal. Today, demolition has resulted in an erosion of built form adjacent to the canal, but where they survive, they create a strong sense of enclosure. Vacant brownfield sites still retain a sense of enclosure where the perimeter boundary walls have been retained, but this sense of enclosure is lost when less robust boundary treatments replace former wall boundaries.

The historic arrangement of factories results in enclosed courtyards and alleyways. This is particularly striking within the general arrangement of the Bridgewater Pottery, and creates an evocative sense of historic character that has been frozen in time.

A curved wall to the elevation of the former Hanley Pottery works creates a distinctive feature on approach from Eastwood Road. Historically, the road arrangement was more angular, through this area when this site was occupied by the Flint Works. When Johnson Bro.s expanded earthenware production onto this site, the road was re-configured to a generous curve, which would help to ensure ease of movement for haulage purposes. The curved wall enabled maximum use of the subsidiary site for commercial purposes, whilst accommodating the road improvements. This feature serves to confirm the intense levels of industrial production occurring during this period. For the most part, the few properties situated adjacent to the canal present a public face away from it, resulting in rear boundary walls, rear building facades, yards and car parks facing onto the canal.

Where factories have been demolished and re-developed for residential uses, properties have been set back from the canal edge, departing from the traditional alignment of the building with the canal, but the use of 3 storey townhouses enables a strong sense of enclosure to be maintained. Modern housing situated to the north west of the canal near to Lichfield Street is more consistent in scale and massing, comprising two storey, terraced dwelling houses with small floor plates. Some properties face onto the canal, but other properties present rear facades. The arrangement of dwellings is suburban in character and departs from the historic urban character.

The two block towers comprise 13 storeys each, and are of excessive height when compared with the surrounding urban context. The buildings have a spatial relationship to each other, but don't relate to other buildings in the area. Single storey parking blocks adjacent to the tower blocks accentuate the differences in scale.

Style

Remaining historic buildings are typical of red brick industrial buildings of the 19th and 20th century, displaying a utilitarian style. A strong sense of rhythm and proportionality is evident on the imposing range of the Bridgewater Pottery (facing onto Lichfield Street), the former Nelson Works and the southern most range of the former Joiner's Square Works (facing onto Hampton Street).

Roofs

Roofs are predominantly that of plain blue Staffordshire tile, although corrugated metal roofing has replaced clay tiles in some instances. The orientation of roof pitches and heights differ within the townscape, creating visual interest, although roofs are predominantly gabled, rather than hipped. Ornamental roof gables and parapets articulate public frontages, such as can be seen on the Bridgewater range facing onto Lichfield Street and the remaining former

Johnson's works facing onto Eastwood Road. Roofs are predominantly that of plain blue Staffordshire tile, although corrugated metal roofing has replaced clay tiles in some instances.

Windows

Surviving historic windows are typically constructed of timber, with small panelled glazing and brick heads or stone mouldings. Feature windows are commonly found on frontages that address the street and present a public face, adding architectural interest. Timber frames and glazing bars are often painted in dark colours, reflecting their age and usage.

Details and Features

Fig. 19: Bottle oven contained within the fabric of the former potbank off Lichfield Street

Brick bottle kilns punctuate the skyline on either side of the Caldon canal. The paper mills chimney and two bottle kilns on the former Trent Bathrooms site have lost their urban context, but the bottle kiln within the former potbank off Lichfield Street is still contained within the fabric of the former factory building.

The canopy overhanging the canal from the Eastwood potworks would have provided shelter for the loading and unloading of products transported by narrowboat. This detail helps to illustrate the close functional relationships between the canal and the buildings.

The decorative ceramic details to the George and Dragon are distinctive features, using locally produced materials in an artistic manner, in order to advertise and sign the premises.

External metal staircases are a common form of access to upper factory floors, allowing for maximum use of internal space for production purposes. They are often painted using coloured paint. Surviving examples can be found within the Eastwood Factory complex.

The wrought iron work to bridge 10 is also decoratively worked, providing an Victorian example of craftsmanship.

Groundscape & Public Realm

The public realm is predominantly functional in character, providing for vehicular access, sustainable transport routes and towpath access. Pocket squares adjacent to the canal are available for use by local residents, but access is restricted. However, this approach ensures that sociable public space is not vandalised, and the costs of maintenance are met by residents living close by. A piece of public art, commissioned by British Waterways, has been situated within one of these pocket parks, and has not been vandalised. Public access points to the canal in this area are numerous.

In other areas, vandalism has constituted a significant problem where areas are publicly accessible, with the Bridgewater Bridge serving as a prime example of targeted vandalism, where there is no natural surveillance during evening hours. Natural surveillance along the canal edge is excellent where residential properties overlook the canal. Natural surveillance decreases adjacent to vacant buildings and industrial buildings that have restricted hours of working. The sites of former factories that have been demolished and are currently not in use afford no natural surveillance.

External metal staircases leading to upper storeys are a strong characteristic of the industrial character of this area. They are often painted a similar colour as the window frames on the building elevation.

Historic signage practices can be found, such as the use of painted brick for vehicular signage within Middleport Pottery, and the use of ceramic tiles to the gable of the George & Dragon public house. The transition from industry to housing is removing the need for commercial signage. Orientation signage and interpretation information for pedestrians and cyclists is not evident along the canal edge, but would benefit users of the canal, given the inner urban context.

Boundary treatments make an important contribution to the visual quality of the conservation area due to the linear nature of the canal structure and associated land ownership. Boundary treatments within City Waterside are predominantly hard in character, reinforcing the urban character. Historical boundary treatments comprise of building façade walls and high red brick walls. Where old industrial buildings are still intact, traditional brick facades facing onto the canal contribute to the historic character. Railings and metal post and chainlink fencing also serve to delineate boundaries in a manner that is sympathetic to the character of the conservation area. Concrete slab walls and concrete post and wire fences present a cheaper alternative, but detract from the historic character of the area.

The strong definition of boundaries has been lost in some instances due to demolition of former factory buildings that once defined the canal and towpath edge. Where re-development has taken place the strong definition of the canal edge has been eroded through demolition of canalside buildings and the introduction of a setback. Sheet piling has been used to define the canal edge in these instances and detracts from the historic character. Demolition of industrial buildings to the southwest of Bridge 8 has resulted in modern steel palisade fencing replacing former buildings to define the site boundaries, with poor views afforded into demolition sites. Former industrial buildings to the north of the canal have been demolished to make way for housing, Stumps of wall forming the canal edge have been left in place, but have not had any finishing treatments applied to them. The lack of coping will result in a gradual deterioration which will lead to failure of the canal edge in the long term, creating a maintenance problem for British Waterways. A steep incline behind one section of wall has left a strip of land that is difficult to maintain, and consequently has been left to grow wild. This is attracting litter and fly tipping, and looks unsightly.

Regenerative scrub has taken the opportunity to establish on former factory sites that have been cleared, including extensive growth of buddleja. This growth helps to screen poor views of clearance sites, but in the longer term, more consciously designed approaches to softworks in this area should be adopted, including the establishment of urban tree planting, such as can be seen on the re-developed Moathouse site. Boundaries to the east of Hanley Park are softer in character. Clipped privet hedging and mown grass verges define the allotments in a

cultivated manner. Vegetative growth on the former opposite side is overgrown and unmanaged, but development is being brought forward on this site which will present a more managed edge along this stretch.

Large remnants of traditional stone sett paving treatments are numerous, with good examples of sett paving occurring in old factory courtyards. The use of paving flags and setts on the towpath helps to articulate the urban character of this area. Original historic stone setts can be found marking the entrance to bridge 8 on the towpath. Tarmac reinforces the urban character of City Waterside further. The generous width of the towpath facilitates ease of movement for pedestrians and cyclists, whilst accommodating moorings.

Fig. 20: Stone cobbles and elevational brickwork to Eastwood Pottery

The canal moorings occur to the north of the former Trent Bathrooms site, but are not used, due to concerns about security.

Night time lighting is minimal. Incidental internal lighting spilling out from buildings adjacent to the canal occurs on the re-developed housing sites, but the daytime working practices contained within the surrounding industrial buildings don't contribute to the public realm in this respect. Some of the impressive building ranges could be accentuated at night time through elevational lighting.

Seating within the City Waterside area is minimal, but examples of stainless steel seating can be seen on pocket squares adjacent to development next to the canal. The use of stainless

steel is appropriate within the inner urban core. The amount of street furniture along the towpath is minimal. Consequently, general views along the canal are maintained due to the lack of clutter.

Litter is evident within the Caldon and detracts from the visual quality also.

11.5: Ecology and Landscape Designations

The canal corridor is designated as a wildlife corridor, providing for the movement of wildlife through the conurbation.

Along stretches of the canal, semi-natural vegetation is present in the water and to the edge of the canal, providing habitat for wildlife, such as foraging bats, insects and birds. Any future development should try to incorporate appropriate wildlife habitats to ensure that connectivity for the above mentioned species is maintained.

The soft edge of the western bank near to Hanley Park supports the movement of wildlife. Some parts of the bank are quite well wooded, supporting bats. Rough grassland with flowers supports invertebrates. Ideally, semi-natural vegetation along the canal on this stretch should be retained. In the event of future development proposals, trees and shrubs along the course of the canal should be provided and existing aquatic vegetation retained.

11.6: Topography, Views & Enclosure

To the west and north of the canal bank, the topography sharply inclines above the level of the canal. Levels to the south and east of the canal drop away, with industrial buildings rising from these lower levels. Views within the canal corridor are channelled for the most part due to the rising topography and built environment.

Industrial structures and towers punctuate the skyline and form local landmarks. The main features of visual interest occur within and near to the Bridgewater Pottery and former Joiner's Square factory. The south facing, three storey high elevation of the Bridgewater Factory facing on to the canal is an imposing and distinctive feature that heralds the extended front range facing onto Lichfield Street. The repetition and rhythm of architectural detailing is visually striking. Views of the front range are also visible on approach from Ephraim Street and Clifford Street. Within the internal arrangement of the Bridgewater factory, narrow alleys are enclosed by similarly distinct ranges, creating a strong sense of enclosure.

Likewise, the range of the southern block of the former Joiner's Square factory is also imposing and visually distinctive, due to the 3 storey height and repetition of architectural details. The sinuous form of the bottle kiln poking out of the factory roof is vernacular, again presenting a distinctive feature within the skyline. Within a short distance, the decorative ceramic treatment of the gable to the George & Dragon provides another example of a striking feature against the skyline.

Travelling further north, the twin bottle kilns that have survived on the former Trent Bathrooms factory are striking because of their distinctive form and massing within a levelled site. They are bereft of any immediate urban context, but the surviving factory range facing onto Eastwood Road is marked for it's decorative style that contrasts with the surrounding utilitarian style. The approach from Eastwood Road towards the curved façade of the former Hanley Pottery is also notable because of the decorative stone frames that form distinctive oculi. The building ranges of the Nelson Works are comparable in style to the Bridgewater factory, but are in a state of neglect. They still combine to form an attractive focus when viewed from Commercial Road.

The tower of Ivy House Mills also forms a strong feature that punctuates the skyline, although separated from the original historic context.

Fine views of contemporary residential properties facing onto the canal are afforded from the Bottleslow bridge and Eastwood Road bridge.

The tower blocks are visually prominent throughout this stretch of the canal, owing to their excessive height.

Views into the industrial premises are afforded where large entrance apertures occur in the industrial building fabric, creating further interest. Views of industrial rooflines in the mid-distance form a distinctive feature against the undulating hills, due to the repetitious arrangement and blue colour.

The loss of industrial buildings to the south west of bridge 8, and consequent boundary treatments has resulted in a poor quality environment that detracts from the historic character of the conservation area on exit from bridge 8 and results in poor views, and affect views of the Eastwood Pottery.

Views of Hanley Park can be glimpsed on the approach from the east, through the frame of the bridge.

Long distance views of the rural hills can be gained from the elevation position of the canal where the allotments occur on the lower slopes. The allotments add an interesting foreground element to these long distance views.

Historically, views within the canal corridor would have been channelled because of the density of development up to the canal edge in this area. Today, channelled views occur in some instances where industrial buildings and perimeter walls remain in situ, but the clearance of former factory buildings has opened up views towards the city centre and surrounding rural hills. The derelict state of clearance sites in the foreground detract from the visual quality of the canal corridor significantly.

Open views of car parking adjacent to the canal edge detracts from the historic character yet further.

11.7: Detractors & Gap Sites

Much of the historic fabric of City Waterside has been lost, leaving wide expanses of clearance sites on view. Clearance has been extensive and the canal conservation area boundary has been significantly reduced in response to this loss. The boundary reverts to the canal structure and towpath for the most part, taking in the last few remaining canalside buildings and surviving factories. Although now not situated within the conservation area, the clearance sites present significant gap sites adjacent to the conservation area and have a negative impact on the character and visual quality of the conservation area. The absence of built form has opened up views towards rear facades that were never intended to be seen from a distance. The neglected state of surviving historic buildings is also a cause for concern, although the cluster of buildings near to Lichfield Street are well maintained.

The vacant industrial site (now a demolition site) to the southwest of bridge 8 detracts from the enclosed industrial character on the lower edge of the canal. The visually open boundary treatments don't screen views onto the demolition site. The poor quality and design of the palisade fencing detracts from the visual quality of the canal corridor. The quality of boundary treatments generally could be improved upon, particularly where demolition has taken place.

Boundary treatments are generally in a state of disrepair and dilapidation and detract from the visual quality further. Boundary treatments to residential properties fronting onto the canal are comprised of metal railings and timber balustrades. The extensive use of these boundary treatments results in a cluttered frontage to the canal. Invasive weed growth further detracts from the visual quality of this stretch.

Vandalism and arson is a significant problem in this area. The repeated vandalism of the glass balustrade to the Bridgewater Bridge is gradually becoming a political symbol of dis-satisfaction for disaffected local residents. For much of the time, access to the bridge is prevented, due to the extent of damage.

The quality of the public realm surrounding the tower blocks detracts from the visual quality of the canal corridor. Car parking adjacent to the canal edge results in views of parked cars from the canal corridor and erodes the sense of enclosure that was a strong characteristic of this area. Litter and fly tipping on sloping land adjacent to the canal and in the canal watercourse further detracts from the visual quality of the canal corridor.

11.8: Enhancement and Development Opportunities

Where feasible, the restoration and renovation of derelict industrial buildings should be encouraged. The Eastwood Pottery, The Trent Bathrooms Building and Joiner's Square are good precedent examples. This approach supports the surviving historic character in this area. A historic regeneration approach to the Nelson Works and former Flint and Stone Mill would extend the impact of renovations in this area, and help to link the area more closely with Hanley Park.

Where sites have already been cleared, they should be re-developed in a manner that helps to repair the urban form and is sympathetic to the surviving historic character. Re-development of the former Electric Light Company site to the south of the tower blocks would be beneficial. Residential properties overlooking the canal would provide natural surveillance and enhance the setting to the canal corridor, whilst benefitting from elevated views across the Trent Valley and towards Hanley Park. Re-development of the former industrial site to the south west of bridge 8 also needs to take place. An office development may be appropriate, to serve as a buffer to the existing industrial uses in proximity to housing. The close links to the City Centre and railway station would help to attract a cycle friendly company.

The Bridgewater Bridge needs to be made more robust, in order to prevent further acts of vandalism. Improvements to the quality of boundary treatments throughout this area would help to restore a sense of enclosure and screen views of cleared sites.

A sign needs to be placed onto the bridge pier of bridge 8, indicating the distance (500m) and direction to the City Centre.

Aquatic planting needs to be managed so that it doesn't obstruct the canal. Litter clearance and removal of graffiti would benefit this section.

11.9: Pressures & Threats

There is a significant risk of further demolition of the surviving historic fabric, due to re-location of industry away from the canal and future re-development of the site. This will result in the loss of remaining historic assets and continue to erode the enclosure of the canal, resulting in the further loss of historic urban form. Changes in government policies for re-development of brownfield sites are likely to lead to an extended period where development is difficult to bring forward. Clearance sites will continue to detract from the historic character for a long time to come and attract crime and anti-social behaviour. This may further encourage local businesses to re-locate away from the area, continuing the trend of dis-used sites. Future development proposals should adopt a restoration and renovation approach, in order to prevent a further loss of context. This approach will help to bring sites back into use quickly and prevent more sites being cleared, thereby attracting anti-social behaviour. At the very least, the reconstruction of boundary treatments to the canal edge would provide a barrier to unwanted movement. As a commercial business, the Eastwood Pottery has benefitted from the heritage offer that the built form of the factory provides, and has been able to capitalise on grant assistance. Sensitive renovation and restoration should be encouraged.

Insensitive development of vacant sites in the future may further erode the quality of the conservation area. New development should respect the characteristics of the historic form and should be of high quality.

The demolition of building elevations that form the canal edge are undertaken without due regard for the long term preservation of the canal edge. Future development proposals that aim to reduce the building elevation facing onto the canal edge to a nominal level should ensure that the wall is appropriately finished, to prevent further deterioration.

The requirements for car parking to support existing and new uses may result in proposals for demolition of existing buildings to provide additional space, resulting in further clearance of the historic environment.

11.10: Summary of Special Interest

This section of the canal provides an interesting example of industrial archaeology, particularly in the form of factory ranges and the punctuation provided by the Grade II listed bottle kilns and associated chimneys. The edge of canal development and orientation of buildings to facilitate loadings to and from the canal testifies to the close functional relationship between the industrial buildings and the canal to facilitate economic industry in the area. The extended length of building ranges evidences the growth of a domestic pottery industry into a global industry, with a strong focus on linear production lines and scale of economies to manufacture and export worldwide, resulting in maximum profit. The design of buildings was intended to rely on repetition and use of locally produced building materials to reduce build costs. The intensity of production led to high densities and the compact use of sites. A strong sense of enclosure between buildings developed. By way of surviving example, the general arrangement of the Bridgewater pottery encapsulates the special interest of this area. Surviving industrial buildings display significant ranges that possess rhythm and repetition, with a vertical emphasis. Traditional materials such as locally produced brick and timber are common place. External staircases lead from enclosed courtyards to upper storeys. Historic boundary treatments and paving within the area further testifies to the use of readily available materials that were robust enough to support heavy duty industry.

11.11: Recommendations and Proposals

Surviving historic assets should be protected, preserved and re-used, in order to bring sites back into use quickly and prevent a further spiral of social and economic decline in the area.

The historic urban form should be repaired where it has become fragmented.

The re-development of former industrial sites needs to respect the historic character of the area.

The historic sense of enclosure should be restored.

12. NORTHWOOD

Fig. 21: Entrance to public open space from the canal towpath

12.1: Introduction

Northwood has evolved over time, as industry and commerce has developed and declined in the area. The developing canal, rail and transport infrastructure separates diverse land uses from each other, as these land uses benefit from the close proximity to Hanley city centre. Northwood should be celebrated as a model for modern day sustainable family living within the inner urban core.

12.2: History and Archaeology

Historically, the study area was characterised by farmland, with a small number of industrial sites situated towards its western end. Northwood Colliery had been established here by the mid 1860s and was employing a total of 430 men below ground and 90 above by the early 20th century. The colliery closed in 1920; it still appears on the 1924 Ordnance Survey (OS) map, but is marked as disused. Two brickworks are shown on the 1880 OS edition, situated to the south west and east of the colliery. By 1900 the works to the east had been demolished, replaced by a rail link between the colliery and the Biddulph Valley Branch line. The other brick works had gone by 1913. Neither the colliery nor brick works were directly situated on the canal, but had easy access to it via Ivy House Wharf, located a short distance to the east. Although the colliery was linked to the rail network by 1900, it continued to utilise the canal by creating a dedicated coal wharf.

Another mining enterprise, the Ivy House Colliery, located to the south east of the Northwood Colliery on the eastern side of the Caldon, was being worked by 1841. The mine closed in *c.*1889.

Tucked into the north-eastern corner of the Ivy House Colliery site, a limekiln was present on the eastern bank of the canal (near to the Ivy House Bridge) by 1832. In 1900 two kilns are indicated in the area, but by 1924 they had been removed.

Elsewhere within the study area, a colour works had been established on Botany Bay Road by 1880. By 1924, the works had been converted to an earthenware manufactory, identified on the OS map of that year as the 'Peace Factory'. The works persisted until at least the late 1930s, but had been demolished by the 1950s.

Residential development within the area was initially concentrated in the north-eastern quadrant and took the form of ribbon development along Keelings Road (originally Keelings Lane), underway by 1775. William Ridgway is credited with transforming this area in 1829, changing it 'from a rude and demoralized part of Hanley into a beautiful, cleanly, well-ordered hamlet'. Ridgway is said to have organised the clearance of 'unsightly cottages' in the neighbourhood and erected or improved a number of other houses. He also built a school and a row of almshouses for 'decayed widows', which was later known as 'Widows Row' (PRN 30661). The area became known as Northwood by 1832 and is clearly indicated as such on Hargreaves' map of the same date. Further development on the eastern side of Keelings Road was in progress by the late 1840s and the expansion of the Northwood area to the north, west and south continued throughout the late 19th and early 20th centuries. A park with surrounding streets was added to the settlement in 1907. A sports ground, now known as Northwood Stadium, had been established off Keelings Road by the late 1960s. The southern part of the study area remained undeveloped until the construction of the Birches Head estate in the 1980s.

The Ivy House, a substantial property with grounds, once stood on the southern side of Bucknall Road and was flanked on its eastern side by the Caldon Canal. The house was present on the site by 1716 and was held by the Vyse family until 1722, when it was sold to a local potter, Thomas Heath. In 1770, the estate passed to John Baddeley, a potter of Shelton; the Baddeley family subsequently retained an interest in the estate until at least the mid 19th century and were responsible for the rebuilding of the house shortly before 1801. The house was a local landmark, lending its name during the 19th century to a nearby road, bridge, colliery, two mills and a canal wharf. The property had been demolished by 1937 and its former site is now occupied by a TA training centre.

12.3: Historic and Existing Land Uses and Function

1880 plans reveal that coal production was becoming established in an area that was formerly used for agricultural purposes. The 1900 plans show a shift in the importance of transport modes for industry, with a direct line from Northwood colliery to the rail track having been constructed, with associated re-profiling of land to support the line. The former coal wharf still existed, but the boat house is no longer shown.

In the present day, land to the south of the canal is still industrial in character, but land to the north has been adapted to suit mixed uses, including residential uses, allotments and leisure/sports purposes. Reclamation of the former coalfields has been undertaken, resulting in a sports stadium and cricket pitch that is available for community use. Ivy House Wharf is now overgrown.

The rail infrastructure is no longer in operation, but the highways infrastructure has been developed, reflecting the shift in transport modes over the centuries. The character of the Bucknall Road crossing the canal to the east of Northwood has become much more engineered to accommodate increased traffic flows to the City Centre (formerly Hanley). Cromer Road has been developed as a secondary route to residential areas surrounding the City Centre. The organic character of Ivy House Road remains, with a drawbridge serving as the crossing structure for traffic flows on Ivy House Road.

12.4: Character of the Built Form

Built Form & Massing

There is no strong block form arrangement to the canal edge, as the buildings surrounding the canal are set back or situated at lower levels. There are no buildings situated within the conservation area.

For the most part, the few properties situated adjacent to the conservation area present a public face away from it, resulting in rear boundary walls, rear building facades, yards and car parks facing onto the canal.

The scale and massing of the built environment reflects the transition from suburban character to urban character, on the approach to the City Centre. Properties between Bucknall Road and Ivy House Road range between 1 and 2 storeys in height. Building floor plates vary in size from domestically scaled floor plates to industrial floor plates. The significant level change to the south of the canal reduces the impact of extensive industrial elevations facing onto the canal, but modern industrial architecture can still be seen within the roofscape.

Fig. 22: Roofscape of canal-side industrial premises

Details and Features

The more recently fitted lift bridge on Ivy House Road presents an element of interest, showing a strong geometric form that is of it's time. The bridge is constructed of steel, with Staffordshire blue brickwork to the piers. The lift bridge uses a hydraulic system.

Groundscape & Public Realm

Access points onto the canal are from Ivy House Road, Bucknall New Road, and Cromer Road (from the bridge crossing Cromer Road and also from Cromer Road through the area of public open space that faces onto the canal). The steep level change to the southern bank of

the canal precludes access to the towpath from other areas. Natural surveillance onto the towpath is poor, because of the absence of windows overlooking the canal.

The stretch of the canal to the east of Ivy House Road is notable for its green character and stewardship of the landscape. The conscious and deliberate arrangement of mature trees to the canal edge has been amplified through pollarding. The clipped hedging and aquatic planting defines the boundary of the mown cricket grounds and adds to the tended character of the canal edge. Grass verges adjacent to the towpath reinforce this character further. The formality of the cricket grounds contrast strongly with the organic arrangement of regenerative planting to the south of the cricket ground and to the east of Bucknall Road. Mature tree planting, with lower shrub canopy species and aquatic plantings line the edges of the canal to the north of Bucknall Road and is well established. They provide a strong sense of enclosure to the canal corridor, and are an important structural element. Regenerative growth to the slopes of the industrial sites to the east of Ivy House Road is more ruderal in character. Natural succession is less advanced in these areas. The reduced height of ruderal species results in a less defined sense of enclosure to the canal. This places a reliance on the use of palisade fencing, and industrial building elevations to define the canal edge in the more industrial areas adjacent to the towpath. Industrial processing equipment and associated architectural fixtures are visible through the railings.

Fig. 23: Planting defines the boundary of the canal-side cricket pitch

Much of the original canal edge remains in situ. Stone copers and supporting brickwork is visible at Ivy house Wharf, but is in a state of neglect.

Button moorings are situated on the southern bank of the canal to the east of Ivy House Road, but concerns in respect of security and a lack of facilities preclude use, despite the proximity to the City Centre.

Paving treatments are simple, using resin bonded gravel to a modestly proportioned tow path. Mooring stops are situated close to the Ivy House Road access point. Level changes at the Ivy House Road access point have been poorly resolved, and a bollard restricts ease of access further at this point.

There is an absence of lighting within this stretch of the canal corridor. Litter deposited in the canal and surrounding area is noticeable and looks unsightly.

Fig. 24: The original canalside edge to the former coal wharf remains

12.5: Ecology and Landscape Designations

The continuity of vegetative cover provides a green lung at the heart of the city. Protected species include bats and otters, due to the tree cover and aquatic planting. Kingfishers are regularly seen along this stretch, with the River Trent providing the ideal habitat for their nesting grounds.

The allotments to the north of Cromer Road enhance the biodiversity offer in the area.

12.6: Topography, Views & Enclosure

The topography slopes down from the north and north west to the south and south east of the Caldon Canal. The canal occupies an elevated position above the surrounding urban environment to the towpath side.

Glimpsed views of tower buildings are visible from the towpath as the land rises upwards towards the brow of the spur on which the City Centre is situated. The industrial roofscape and successional planting to the south of the canal towpath obscure long distance views for the most part, but there are glimpsed views to the rural hills across the River Trent valley flood plain and surrounding urban environment from the towpath. Views of the cricket grounds are easily afforded due to the south eastern aspect of the site that extends down to the level of the canal. Ivy House Bridge creates a strong visual landmark that articulates the change from suburban to urban character.

The industrial buildings and mature trees combine to enclose the canal corridor. This creates a frame that channels views along the canal corridor. The meandering character of the

Caldon results in shorter channelled views that are terminated by mature tree planting in most instances along this stretch, emphasising the green character of the canal more strongly. Modern housing occupying an elevated position to the west of Cromer Road is highly visible.

Bridge 12 is a modern engineered structure that represents the era in which it was built. The width of Bucknall Road has resulted in an extended passage underneath the bridge, with a strong sense of enclosure.

Views of the allotments from the towpath add to the domestic character of suburban housing to the north of Cromer Road.

Fig. 25: The canal towpath passes under bridge 12

12.7: Detractors, Neutral Areas & Gap Sites

Poor quality modern development in the Cromer Road area detracts from the historic character of the canal. Poor quality boundaries , service yard storage and rear car parking detract the visual quality further. Razor wire lining the top of palisade fencing communicates a negative message to visitors. Site security is important, but perhaps the design of perimeter boundaries could be more symphathetic to the historic character of the canal.

Litter floating in the canal also detracts from the overall visual quality.

12.8: Enhancement and Development Opportunities

The evolving transport infrastructure in this area has formed an interesting transport lattice, with occupation of the spaces between the infrastructure through a variety of different land uses. An industrial aesthetic blends with suburban domesticity and the formal grounds of the cricket pitches. In short, Northwood provides for sustainable family living, with the City Centre a short distance away. Future development opportunities are restricted due to access constraints, but opportunities exist to develop further the quality of amenity resources for local residents.

The former coal wharf could be re-instated to provide secure moorings and facilities for narrowboats, whilst providing a waterside setting that the stadium can utilise for water-based activities. Opportunities to re-instate the boat house could be explored as part of the wider development of Northwood Stadium. Environmental improvements could be undertaken to define the canal towpath entrance to the area of public open space further north from the former boathouse.

Rear boundaries and storage yards should be screened from view using tree and hedge planting, in order to further enhance the ecological offer of this stretch.

Greater use of the canal will place eyes and ears on the towpath that will compensate in part for the lack of natural surveillance. Enhancements to access points would help to encourage people onto the canal and towpath, and enable them to make use of this sustainable transport route at the heart of the city.

Rear boundaries and storage yards should be screened from view using tree and hedge planting, in order to further enhance the ecological offer of this stretch. The area would benefit from a tidy up, and a bin located on the approach to the road bridges would help to prevent litter dropping into the canal, on the way home from the City Centre.

12.9: Pressures & Threats

Future maintenance of the canal edge may result in the loss of the original edge to the canal. Future maintenance should aim to preserve the canal edge.

The disused former coalwharf and boathouse inlet is becoming overgrown with vegetation. Future maintenance programmes for the canal should include these areas, if possible, in order to ensure their preservation for future enhancements. In the long term, it is recommended that these features be restored, in an appropriately sympathetic manner to the historic character of the canal.

The re-location of canalside industry to other areas in the city will result in the loss of industry adjacent to the canal. Industry within the northwood area provides easily accessible employment opportunities for local residents, supporting sustainable family living, and should be retained where possible.

12.10: Summary of Special Interest

The original canal edge evidences traditional construction and engineering methods that were used to construct the network of waterways, using locally sourced materials.

The former coal wharf and the boating house inlet survive as physical fragments of infrastructure associated with the canal network. They illustrate the historic narrative of the development and decline of industry in this area. Historically, they formed the link between localised industry and access to the wider canal network and major shipping ports, providing the physical infrastructure for loading and unloading of goods and supplies into and out of the narrowboats.

12.11: Recommendations and Proposals

The original canal edge be preserved and repaired, or re-instated in a similar fashion.

The former coal wharf and boating house inlet be restored and renovated, to support water-based activities associated with Northwood Stadium.

The varied mix of land uses be retained, including canalside industries, in order to preserve the assets in the area that support sustainable family living.

Wildlife habitat that supports local wildlife should be retained.

Fig. 26: View of canalside allotments, to the north of Cromer Road

13. BIRCHES HEAD & SNEYD GREEN

Fig. 27: An untended landscape occupies the space between the canal and rail line

13.1: Introduction

The construction of the Caldon Canal cut through an agricultural landscape set within the valley flood plain of the River Trent. Subsequent to the construction of the canal, the mineral railway line was constructed on the higher slopes to the west of the canal, supporting the development of isolated pockets of industry. Today, the industrial buildings have been demolished. A wild and untended landscape, rich in wildlife interest, has reclaimed these former industrial sites. The historic canal structure and associated bridges remain hidden within the landscape.

13.2: History and Archaeology

Settlement within the Birches Head area is first documented in the Domesday survey of 1086, which records Hulton, grouped together with Rushton, under the ownership of Robert de Stafford. Early activity, however, is dominated by the Cistercian abbey at Hulton, founded by Henry de Audley in 1219. Although Hulton was a modest institution, it had a marked impact on the surrounding landscape through its exploitation of the area for farming, the creation of fishponds (the location of which is preserved in the modern street name of 'Fishpond Way'), and small-scale industrial activities, including coal mining. The monks also operated a mill, the site of which continued to be involved in the grinding of corn until at least 1924. The mill finally ceased production in the 1930s, when it was apparently involved in the preparation of potters' materials. The site is now occupied by Mill Farm, situated adjacent to the western end of Greasley Road. While Hulton's location within the Trent valley was relatively isolated in the Middle Ages, it did not sit within a deserted landscape. The nearby hamlet of Hanley represented the most populous centre in the immediate vicinity, although similarly-sized settlements were also located a little further afield at Burslem and Tunstall. To the east of Hulton were a number of isolated moated sites, some with parks, which had been established following the deforestation of parts of the area in the early 13th century.

The 1880 Ordnance Survey (OS) map shows a feature to the east of the Caldon Canal marked as an 'Intrenchment'. The earthwork comprises two comma-shaped features that remain discernible on modern aerial photographs of the area. It is not known if this feature relates to the abbey, or is associated with earlier or even later activity.

Following the dissolution of the abbey in 1538, the monastery and all its possessions passed to the Crown. In 1543, the manor of Hulton, of which the study area formed a part, was granted to Sir Edward Aston, whose great grandson, Sir Walter Aston sold it to William Sneyd of Keele in 1611. The Sneyd family retained an interest in the area until 1951, when their last remaining holdings, Abbey Farm, Mill Farm and Birches Head Farm, were offered for sale on the break-up of the Keele estate (Greenslade 1963, 249). Abbey Farm building is now a Grade II Listed property.

The study area retained a predominantly rural character until the latter half of the 20th century and it would appear that the presence of the canal did not act as a stimulus for industrial development in this part of the Potteries. Although some industry was present within the area by the mid 19th century, this was predominantly confined to relatively small-scale coal mining. This continued until the late 19th century; 1880 OS map shows a small colliery the western side of Leek Road and several disused coal shafts are also indicated across the study area. The map also indicates the presence of brick and pipe making concerns to the east of Leek Road.

The industrial component of the study area had declined significantly by 1900, with some sites, such as the brick works shown in 1880, replaced by residential development. Even by this late date there was relatively little urban growth in the area. This did not accelerate until the period 1931-1938, with the construction of municipal houses and properties financed by the Sutton Dwelling Trust at Abbey Hulton. Further significant development did not occur until the 1980s and the construction of the Birches Head estate.

For much of its history, the study area in the Sneyd Green area formed part of the Lordship of Abbey Hulton, held by Sneyd family from the early 17th century. Land use within the area was predominantly agricultural until the second half of the 19th century, when Foxley Bridge became the focus of industrial development. An oil and chemical works, established by Josiah Hardman in 1867, operated at Foxley Bridge until 1940 (Greenslade 1963, 252). Between c.1880 and c.1913 a vitriol (sulphuric acid) manufactory functioned on a site to the north-west of Hardman's chemical works. By 1900, the British Aluminium Company had constructed a large rolling mill (PRN 30831) between the canal and the railway, immediately to the south of the chemical works. The mill continued in production until 1960, when the works was acquired and converted to a packing house by the Johnson Brothers pottery firm. By 1994, the majority of the site had been cleared and remains vacant to the present day. A small mid-20th-century building remains at the southern end of the former complex, as does an industrial unit to the south east (latterly occupied by PVH Engineering), but it is unclear if either were connected to the aluminium works. An aluminium foundry was in operation to the south of the chemical works by 1900, but had been demolished by the early 1980s.

There was little residential development within the study area prior to the 20th century. Settlement at Milton was well established by the late 19th century and had begun to spread westwards along Millrise Road. This encroachment, however, stopped short of Foxley Bridge and the area did not witness further urban growth until the second half of the 20th century.

A public house has been situated at Foxley Bridge since at least 1832. Given the lack of settlement within its immediate environs, for much of its history the public house may have relied on custom from the nearby factories and from canal users.

13.3: Present Day Land Uses

Today, only the rubble remains and lower portions of the brick canal edge wall of the aluminium works are visible from the canal towpath. A former warehouse is dis-used. Natural succession has taken place on former industrial sites, and much of the surrounding land on

the higher slopes is not managed. The valley flood plain is used for grazing land for horses where drainage allows, or forms valuable marshland habitat for wildlife.

Isolated strips of land between the canal and mineral railway line are landlocked, and disused. Suburban settlement has replaced former agricultural land to the north west of the canal, taking advantage of the close proximity to Hanley and the City Centre.

13.4: Character of the Built Form

Architectural Character, Materials, Colours and Textures

The built structure of the canal is situated within the landscape, and the water channel complements the marshy character of the lower flood plain. A utilitarian style best describes the historic structure of the canal and associated historic bridges. The mix of red and blue brick with natural stone to the three single span arched bridges is functional engineering of its time that has become charming in recent years.

The immediate area has a wild feel to it, which contrasts with the built form of the surrounding urban conurbation.

The character changes to the northwest of the railway bridge. The character is suburban due to the arrangement of housing, which is further accentuated through the use of lawns fronting onto the canal.

Built Form & Massing

Fig. 28: Bridge 14 demonstrates traditional engineering techniques

The bridge structures associated with the historic canal structure comprise the built form, as there are no buildings situated within the conservation area. Due to their intended function, they are domestic in scale, serving the needs of narrowboats on the canal, whilst allowing for safe passage of vehicles above. The single span arch of bridge 14 provides a distinctive

focal point on approach. The parapets to bridge 14 rise slightly, to reflect the form of the arch. The mineral railway line is a later addition, and is orientated at a slight angle to the canal, to maintain the straight line of the tracks.

Details and Features

Bridges 14, 15 and 16 are traditional brick and stone cambered arch bridges, probably built at the same time as the canal.

A railway bridge (14A) spans the canal to the east of the suburban housing estate. Bridge 14A is interesting in that it illustrates how industry adapted around the canal structure as business expanded. The rough hewn stone and riveted metal panelling is very much of its time, reflecting engineering practices during the railway era. A second railway bridge (16A) spans the canal to the northeast of the disused warehouse next to Redhills Road. The concrete structure is modern in style and suggests a much later addition. High galvanised steel railings have been added to the original slender railings of bridge 16A. The additional railings detract from the original design integrity of the bridge structure and are incongruent with the green character of the area.

Two replacement milestones occur on the towpath (dated 1985), stating 'Etruria 4 miles, Uttoxeter 26 miles' and 'Etruria 4 miles, Uttoxeter 26 miles'.

Fig. 29: The angled railway bridge (14A), built after the canal

Groundscape & Public Realm

The former Aluminium Works constitutes vacant brownfield land. Regenerative scrub has taken advantage of the dis-used nature of the site. Willow, birch, alder and hawthorn are typical species that have thrived on this site. They combine to form an attractive canalside setting and help to mask the remaining rubble associated with the former works. The lower-lying marshlands to the east of the canal near to Milton are marshy in character and support marsh habitat and wet woodland species. Willows and hawthorn predominate adjacent to the

towpath. Both sides of the canal near to Milton have a strong green character that gives a strong sense of enclosure to this stretch of the canal.

The western bank to the north of Birches Head School becomes more open in character as scrub associated with the mineral railway line becomes more removed from the canal. The resulting strip of land has become colonised with grasses, due to the landlocked nature of the site. Land to the east of the canal and Birches Head High School is better drained and supports animal grazing. Consequently, the landscape is more open in character, although hawthorn hedges and hedge trees still define the edge in places. Hedge trees defining field boundaries on the lower slopes help to preserve the green character of the canalside setting.

There is a clear vegetative structure to the canal to the north of the mineral railway bridge at Birches Head. Hawthorn hedging and trees such as willow, oak and alder provide enclosure to the canal corridor. A grass verge separates the towpath from the canal edge, and helps to distance the pedestrian from the water channel. The grassed verge also helps to articulate the green character of the canal further. The hawthorn hedge peters out south of the railway bridge, and a more naturalistic boundary results, composed of mainly shrub canopy species, such as hawthorn, field maple, hazel, blackthorn, crab apple and rowan.

Ruderal planting has resulted at the edges of the bank next to the housing estate due to a lack of maintenance of the canal edge. Reeds and wetland species have now colonised the extending pool, and the resulting marshland changes the character of the canal edge.

Natural surveillance on the canal is poor due to the absence of built form.

Fig. 30: Stone sett paving and edging to the underside of bridge 15

Pedestrian and cycle access to the canal is poor. Desire lines provide access routes to the towpath at bridge 15 and 16. The unfinished quality of access points and level changes don't support inclusive access. The narrow width of bridge 14 has been pedestrianised, using inappropriately designed steel barriers to prevent vehicle access. The narrow width of bridge 15 creates a safety hazard and can only support one vehicle at a time. A steel pedestrian bridge has been added to bridge 15, in order to allow pedestrians to pass over the canal in safety. The motorbike barriers placed on a slope make access for cyclists difficult. Other than this, there are no other access points onto the canal along this stretch until Millrise Road is reached in Milton as the embankment adjacent to the River Trent precludes access to the towpath.

Canal edges show a mix of materials. Long stretches of original stone edges remain in situ, showing the use of local stone to construct the original canal structure. Soft earth edges also occur on this stretch and help to support the movement of wildlife. The remains of the brick building elevation of the former aluminium works defines the western bank of the canal edge near to Milton.

Resin bonded paving is used as a paving surface for this area, reflecting the semi-rural character, but granite setts are used to the underside of the bridges, reflecting the historic character of the canal. The concrete cover to the sluice gate north of bridge 16 is deteriorating and in need of repair. Eventually, the cover will fail and present an impassable obstacle on the towpath.

There is no provision for lighting or seating. Litter is a problem.

13.5: Ecology and Landscape Designations

The canal runs alongside the floodplain of the River Trent to the east and Ford Green Brook to the north. There are extensive areas of unmanaged swamp with open grazed fields. This supports a large variety of wildlife, including otters, kingfishers and bats.

The canal corridor in this area is an important green linkage from the open countryside and the Staffordshire Moorlands into the conurbation.

13.6: Topography, Views & Enclosure

The topography slopes down from the northwest to the southeast of the Caldon Canal at Birches Head. The topography slopes down from the west to the east of the Caldon Canal at Sneyd Green. Consequently, land rises above the western bank, and falls below the eastern bank.

The alignment of the canal curves at one point towards the upper slopes. This is because the underlying topography of the land dips at this point. Historically, this small valley drained the water from the upper slopes. The 1900 plan shows how an embankment was built to raise the level of the canal to bridge the drainage valley and ensure a level flow of water. When the canal was flooded with water, the dip filled up and extended the span of the canal at this point. Evidently, the old narrowboats were sent to this location for disposal. A hole was placed in the boat so that it conveniently sank out of view.

The canal embankment presents a significant drop in levels down to the River Trent.

Due to the surrounding vegetation, views tend to be channelled along the canal corridor. The three arched bridges and railway bridges form important features along the route due to their traditional construction and form. Intermittent breaks in the hawthorn hedge allow for open views across the valley, with grazing horses in the foreground. The linear arrangement of poplars at Carmountside Cemetery forms a distinctive landmark and help pedestrians and cyclists on the towpath to orientate themselves.

The surrounding vegetation set within the natural landscape restricts views into the canal for much of its length, but properties on Monsal Grove front onto the canal and enjoy a pleasant

aspect. The cultivated lawns associated with the suburban housing open up the canal corridor to allow views of properties to the west of the railway bridge. Views of properties on the higher slopes are screened from view due to trees on the railway line and field boundaries.

Long distance views are afforded across the valley at the footpath entrance to the south of Linkend Close, where vegetation is sparse.

13.7: Detractors, Neutral Areas & Gap Sites

Although not within the boundary of the conservation area, the disused warehouse has the potential to enhance the canalside setting, but due to it's disused state, serves as a detractor. The red brick building arrangement forms a courtyard fronting onto the canal, which is a distinctive historic characteristic of urban form adjacent to the canal corridor. This character is marred by the disused nature of the site, barbed wire security fencing and breezeblock walling.

The two pipelines running across the canal look unsightly, because of the poor design quality and use of materials that are more appropriate to an urban context. The metal panels have rusted and need some maintenance. Anti-vandalism features reto-fitted to the structures further contribute to an unwelcoming approach to the city.

As mentioned previously, the retro-fitted railings on the concrete mineral bridge detract from the original design intent, as evidenced by the remaining slender railings. The railings are not in proportion with the bridge structure and the use of galvanised steel does not fit well within the semi-rural context.

Graffiti to the underside of the bridge piers is reminiscent of urban contexts and looks odd within the wild and unmanaged setting of Sneyd Green. Likewise, the use of steel within the motorbike barrier structures at entrance points to the canal is reminiscent of urban areas and does not reflect the character of the surrounding natural landscape. The barriers that block vehicular access to bridge 14 are similarly unsympathetic to the historic character of the traditional bridge structure. Some railings would be more appropriate.

Litter is also a problem in this area.

13.8: Enhancement and Development Opportunities

The landlocked nature and unsuitable drainage conditions surrounding the canal corridor mean that development options are limited in the Sneyd Green area. The former aluminium works is one site that would suit re-development for residential use. The development of proposals should aim to provide a high quality canalside setting that helps to create a welcoming approach to the city, and increase natural surveillance onto the canal.

The former warehouse building to the north of Redhills Road and the canal should be brought back into active use. If industrial land uses on this site are difficult to achieve, a conversion to residential use may be appropriate. Bringing the building back into use is likely to result in a better maintained backdrop to the canal, and will help to provide natural surveillance onto the canal corridor.

The suburban context of Birches Head could be extended through new build development in the future, subject to the resolution of access restrictions. Any development adjacent to the canal should present an integrated face onto the canal, rather than turning away from the canal. Future development should aim to incorporate sustainable techniques.

The arched bridges would benefit from a light clean, to remove any deposits, such as cement. Repairs to the stonework the define the arch will also help to prevent further damage of the structure. The railings that have been added to the former mineral railway bridge should be removed, to restore the original design integrity of the bridge structure.

Vegetation, such as alder trees growing in the canal edge wall should be removed. This would open up views of the canal from the towpath and help to reduce damage to the canal structure. If left in situ, they could become a causal factor for a breach in the canal wall. The landlocked nature and unsuitable drainage conditions surrounding the canal corridor mean that development options are limited. The former aluminium works is one site that would suit re-development for residential use. The development of proposals should aim to provide a high quality canalside setting that helps to create a welcoming approach to the city, and increase natural surveillance onto the canal. Allotments could also be brought into use on strips of land that are too narrow to be developed. This would enhance the biodiversity offer in the area.

Fixtures would benefit from a maintenance programme. Removal of the graffiti from the bridge piers will help to enhance the visual quality of the canal at key focal points. The pipelines should be maintained to a higher standard, or removed if they no longer serve a function. The concrete cover to the sluice gate needs to be repaired or replaced, to ensure that the towpath continues to be accessible. Additional or replacement elements should recognise the semi-rural character of the canal, and the design should complement the surrounding environment. Improvements to the existing pedestrian access to the canal would help to enable inclusive access.

13.9: Pressures & Threats

The narrow character of the single span arched bridges creates problems for vehicle safety. There may be pressure brought to bear to demolish these structures and replace them with more modern bridges. An appropriate design solution should be sought that retains these structures so that they continue to serve as a strong focal point within the canal corridor.

Growing vegetation within the canal edge may damage the historic structure, and possibly result in a breach in the long term. Vegetation should be cleared from the canal edge. There is also a risk that surviving traditional canal edge treatments may be replaced with steel piling where redevelopment takes place. The traditional canal edge should be replaced as found, or a complementary canal edge be re-instated.

13.10: Summary of Special Interest

Bridges 14, 15 and 16 are very traditional, and are a part of the canal structure. They demonstrate historic engineering techniques for supporting loadings. Their historic construction forms an important narrative for the Caldon canal. These structures should be protected and preserved, as they form distinctive historic features along this stretch.

The original canal edge demonstrates engineering techniques for the water channel, using locally sourced materials and should be protected and preserved, or replaced like for like.

13.11: Recommendations and Proposals

Bridges 14, 14A, 15, 16 and 16A need to be protected and preserved, in order to better convey the historical narrative of this area. The original canalside edge should also be protected and preserved, through sympathetic repair and maintenance.

The green character of the canal needs to be recognised, and measures taken to preserve and enhance this character further.

Fig. 31: Stone edging to canal towpath

14. MILTON

Fig. 32: Bridge 18, Milton, with stone setts to towpath

14.1 Introduction

Milton has evolved as an area of settlement. The Caldon Canal provided the catalyst for introducing a more diverse range of land uses within the area which further increased with the introduction of the railway line but even then, the development of industry was never dominant. Because of Milton's balanced mix of uses, it has not suffered from industrial decline to the same degree as some of the inner city areas.

14.2 Archaeology

Development in this area is based on a relationship between the River Trent and its tributary the Foxley Brook, running along a marshy valley crossed by an old road, Millrise Rd and Milton Road, leading to the small settlement of Milton, named from the Old English for 'settlement at the mill'. A watermill is indicated on the Trent on Yates' county map of 1775, still in use throughout the 19th century. A strong pattern of long, gently curving field boundaries run up from the Trent valley to either side, with few boundaries within the valley floor itself, suggesting arable farming on the valley sides with meadow and pasture in the bottom.

The arrival of the canal led to the establishment of packing warehouses for pottery, including that of Johnson Brothers who sent their wares up the canal from Hanley. Even so, there was little development within the study area until after the arrival of the railway in 1867.

Development around the Foxley Bridge in the later 19th century included the Foxley Inn and an oil and chemical works, later accompanied by an aluminium works. Cope Street dates from the later 19th century, one of the first residential streets not directly on Millrise Road, and still retains its Victorian character. The Hardman Institute at the end of Cope St was built 1895 by Josiah Hardman, proprietor of the chemical works. The rest of the area between the canal and the railway was filled in throughout the 20th century.

Bullers electrical porcelain and art pottery works was an important employer in the north-west of the study area from the early 20th century, although the original factory is gone. The chemical and aluminium works have now been returned to grass but the mineral railway line is due to be brought back into active use, as a haulage line. The Trent valley remains alongside the east bank of the canal

14.3 Historic and Existing Land Uses

Land use within the Milton area was originally agricultural. This land use supported the development of the corn mill and associated worker's community including housing and commercial uses (public house). Industrial uses developed and expanded around the Caldon canal, feeder and mineral railway line, as the infrastructure developed, but agricultural land uses were retained to the periphery of this development. A planned arrangement of worker's terraced housing to the east of the industrial area contrasts with the organic ribbon development further east. Historically, a village green and lift bridge helped to link the canal to the Foxley Hotel, the Hardman Institute and shops on MIllrise Road, forming a civic heart.

A balance of land uses is now evident in this area, comprising a mix of residential use, amenity use, industrial use, agricultural use and greenbelt. The industrial uses have contracted. The civic heart has become fragmented due to industrial development and the loss of linkages from the canal.

14.4 Character of the Built Form

Architectural Character, Materials, Colours and Textures

The buildings within the conservation area at Milton possess a decorative character, comprised of red brick and sandstone.

Listed and Unlisted Buildings of Importance

Fig. 33: The Foxley Hotel

The Foxley Hotel, located on Foxley Lane is a two-storey building, of 'Queen Anne style'. The main frontage presents onto Foxley Lane, and is displays an assymetrical frontage, with the entrance located to the left of the centre of the pediment. The entrance is marked with an ornate door hood. Console brackets support a tablature and cornice, with the pediment situated above.

A band of ceramic tiles separates the pediment from the main elevation, providing a rich decorative element. The pediment displays decorative stone detailing, console brackets, terracotta brick dentils and a finial. Perforated decorative ridge tiles finish a clay tile roof. Mounded stone cills and lintels define the window apertures. Timber frames to the ground floor windows are curved.

A single storey service unit is attached to the southern gable, and a stable block, with oculus window and decorative finial to the gable apex, is located next to the service block. A wide stable entrance on Foxley Lane would have allowed access to the stable block. A brick boundary wall now blocks the view of the original frontage in its entirety.

The irregular roof plans suggests that the building has been extended over time.

Fig. 34: View of front elevations to Foxley Terrace, Hardman Street

Foxley Terrace (otherwise known as 2-16 Hardman Street) can be described as a two storey red brick terrace. The decorative detailing within the front elevation facing onto Hardman Street distinguishes this terrace from other terraced housing in the area. Ground floor windows and doors are finished with cambered brick heads and stone details, and the grouping of doors and windows forms a group contained within three arches. This arrangement, combined with the stepped arrangement of roof pitches at alternate properties, gives the impression of double fronted houses more often associated with a highly skilled class set.

The pediments above the first floor windows have decorative terracotta panels and dentils. The pediment is supported by brick consoles, with finials attached to the apex of the

pediment. Blue brick detailing further decorates the frontage. Brick detailing also occurs to the cornice and gables.

The frontage of No. 16 has stepped pilasters with stone capitals to the sides of the window and door. The gable elevation shows an entrance that has now been bricked up. These details indicate that the property has been converted from a corner shop to a dwelling.

Fig. 35: Front elevation of former library, The Hardman Institute

The Hardman Institute was established by Josiah Hardman in 1895, proprietor of Josiah Hardman Ltd (chemical works). The library included a reading room, and as the name implies, was an institutional establishment serving a civic function. This is evidenced by the large floor plate of the building when compared with surrounding buildings in the area. The square plan and depth of the building results in an interesting roofline, as pitched roofs are orientated to fit. This results in an interesting display of pitched roofs and gables, and a tower adds further interest to the roofline.

Finials and perforated decorative roof tiles are used to finish the detailing of the clay tiled roof. Three layers of brick dentils continue the decorative element to the tower, an element that is repeated on the inset brickwork. Within this inset, circular moulded stonework surrounds a decorative terracotta panel. Decorative terracotta panels and brick dentils are also used to ornament the gables. A decorative terracotta panel divides the upper tower from the lower storeys of the building. The upper storey window of the tower repeats the design of the windows to the southern and western elevations. Cambered brick heads with key stones and stone cills are used to frame timber casement windows.

Decorative moulded plaques signify the civic function of the building, with a coat of arms situated above the door. The doorcase is comprised of stone capitols with a decorative terracotta arch and sandstone key stones. A semi-circular double brick arch frames a plain fanlight. Below the fanlight is a 6 panelled raised and fielded door.

Built Form & Massing

The scale and massing of the built environment is predominantly two-storey buildings, of relatively small floor plate.

For the most part, properties present a public face away from the canal, resulting in rear boundary walls, rear building facades, yards and car parks adjoining the canal. Where the street grid form is evident (Shotsfield Street and Shotsfield Place) it can be described as a rectangular street grid arrangement, enabling views into and out of the canal conservation area.

Details and Features

Bridge 18 is constructed of Staffordshire blue brick, and shows a single span archway reinforced with wrought iron. Three courses of plinth stretchers spanning the length of the bridge and the bridge piers add interest to an otherwise utilitarian structure. The original copings have been replaced with concrete copers.

The railway bridge (bridge 19A) shows the use of rough hewn locally sourced stone to the gate piers, and the characteristic diagonal span across the canal.

The piers of a former bridge still survive to the east of the Foxley Public House. The bridge would have led from the chemical works, across the canal and village green, to the Hardman Institute.

De-commissioned boat hulls have been used to stabilise the banks of the stream between the canal and Redhills Road.

Groundscape & Public Realm

Access to the canal from the surrounding street network is restricted, with pedestrian and cycle access points available from the bridge of Millrise Road. Other than this access point, there is no direct access to the canal. The lack of access impairs the potential of the canal corridor to serve as a sustainable transport corridor for pedestrians and cyclists.

Boundary treatments at Milton are mixed in quality and character, due to the delineation of rear boundaries of properties. Mature tree planting, hawthorn hedging and grassed verges significantly enhance the quality of the canal-side setting on the towpath side. Typical boundary treatments include traditional stone walling, red brick and Staffordshire blue brick walling. Timber closeboard fencing and steel railings also define rear boundaries, but are much more generic in character, with little contribution to the local character. The surface treatment to the towpath is predominantly resin bonded gravel. The original cobbled paving with stone edging can be seen underneath bridge 18.

The provision for seating is limited in this area due to the narrow width of the towpath, although isolated seats are found next to the canal and a small picnic area has been provided near to the A53 bridge.

14.5 Ecology and Landscape Designations

The natural landscape has been retained to the east and south of the canal, where the River Trent flood plain is situated. The habitat of the flood plain can be described as grassland scrub and wetland, including marshes, and allows for the continuation of the green corridor that runs through the inner urban core. The corridor will be used by a wide variety of species, including protected species such as bats, otters and kingfishers.

The allotments to the west of Shotsfield Street will also hold some ecological value that complements the habitat value of the surrounding natural landscape.

14.6 Topography, Views & Enclosure

The topography slopes down from the north and north west to the south and south east of the Caldon Canal. The canal is slightly elevated above the valley floodplain.

For much of this area, views are channelled due to the surrounding vegetation and hawthorn hedging. Local landmarks become much more pronounced, due to the channelled sightlines, including views towards the Foxley Public House and bridge 18. Where boundaries remain open, long views are afforded across the valley flood plain towards the surrounding hills. A pleasant view along the valley flood plain is available after the A53 bridge.

The towpath affords a characteristic view of terraced elevations facing onto Shotsfield Street.

Fig.36: Characteristic view of industrial worker's terraced housing

Close range views of the front elevation of the Foxley Public House are available on approach from Milton Road and Foxley Lane. The front elevation of Foxley Terrace is visible from the entrance to Hardman Street from Millrise Road. The narrow character of the lane leading past The Hardman Institute, combined with vegetative growth screens this building from view, except at the entrance to this site.

Whilst not within the conservation area designation, the towpath affords voyeuristic views into rear gardens of properties backing onto the canal.

14.7 Detractors, Neutral Areas & Gap Sites

Views into the service yard of the industrial building to the east of Foxley Public House look cluttered and untidy.

The electrical pylon to the south east of Shotsfield Street detracts from the rural character of the flood plain, but serves the purpose of restricting future development in this area.

Timber close board fencing to the rear of the property adjacent to the towpath at bridge 18 also reduces the visual quality of the canal corridor.

A small area of land to the north of bridge 18 has been left to grow wild, detracting from the manicured character of the rear garden terraces.

Signage that advertises the close proximity of the shops in Milton detracts from the visual quality of the bridge, and could be approached more sensitively, using historic signage techniques.

14.8 Enhancement and Development Opportunities

A future development opportunity exists for the site to the south of the Foxley Hotel. Any development brought forward on this site should respect the historic character of this section, and have regard to the setting of the Foxley Hotel. The quality of the public realm to the front of the Foxley Public House could be improved to enhance the quality of this frontage. The public footpath leading from Hardman Street to the Foxley Public House could also be improved, to encourage access and improve connectivity.

The service yard to the industrial premises to east of the Foxley Public House could be better integrated with the canalside setting. The re-instatement of the former lift bridge would help to improve pedestrian and cycle connectivity in the area, linking the existing sports ground with Foxley Lane and the Foxley Hotel. Narrowboat moorings would encourage narrowboat stop-offs for eating and drinking. Taking a long term view, the re-instatement of the village green, with links re-established from the former lift bridge to Hardman Street would reveal the front elevation of the Hardman Institute to users of the Caldon Canal, and help to restore the civic heart of Milton that has been eroded over the years. It would also improve links with the small shops on Millrise Road.

Improvements to the access points leading to the canal would encourage use of the conservation area as an off road sustainable transport route by surrounding local residents. An uplift in the quality of boundary fences to some properties would also help to improve the visual quality of the canal.

The area of unused land next to bridge 18 could be re-modelled to provide a seating and picnic area for local residents, taking advantage of the pleasant views along the canal at this point, although the area should first be assessed for ecological value.

14.9 Pressures & Threats

The historic civic heart of Milton has become fragmented over the years. Future development proposals in this area should contribute to the restoration of the civic heart in some manner, with a long term objective of restoration.

The Foxley Hotel forms a prominent feature from the southern approach on the Caldon Canal. The loss of this historic building for development purposes would further erode the already fragmented civic character of the area. Any future development proposals for the Foxley Hotel should by sympathetically undertaken, and take advantage of the opportunities afforded by the Caldon Canal. Retention of the public use within this building should be retained in some measure.

The canal structure and associated bridges are historic structures in their own right, and should be maintained to a standard that preserves their historic character.

Future development proposals to the south of the Foxley Hotel may impose on the historic character of the area. Design proposals should enhance the setting of the Caldon Canal at Milton, and reference the historic character. Boundary treatments for new proposals should aim to use local materials, rather than generic boundary treatments.

14.10 Summary of Special Interest

The location of the The Foxley Hotel was commercially thought out. It enabled the benefits of trade associated with both the canal and the rail station. The proximity of the hotel to the canal suggests that canal trade was important, but the frontage facing onto Foxley Lane, leading to the rail station, suggests that rail trade was also an important consideration. The building still survives for its intended use, although the trade connections have diminished. It now relies on local trade within the surrounding residential environment. Minor modifications have been made to the building, but much of the architectural intent and resulting decorative character still survives.

The Hardman Institute is the result of the philanthropic gesture of Josiah Hardman (chemical works proprietor), in the social context of concern over poor literacy levels within the local community. The setting of the building has been compromised over time but the building has been maintained to an excellent condition and retains much of the original architectural intent.

Foxley Terrace provides a good example of philanthropic worker's housing. The architectural design employs architectural devices to aid the perception of a better class of residents, in close proximity to The Hardman Institute.

Bridge 18 and the canal structure provides a surviving example of the technical prowess of industrial engineers during the 18th century.

14.11 Recommendations and Proposals

The Foxley Hotel, Hardman Institute and Foxley Terrace need to be preserved and protected, and where possible, improvements made to the building settings.

Future development opportunities in this area should be mindful of the historic character of the canal and preserve the natural habitat that supports local wildlife. High quality architectural design and locally sourced materials should be utilised within any design proposals. Car parking should be sensitively integrated within the development so as not to detract from the canal-side setting.

Connectivity and access could be further improved through re-instatement of the former lift bridge, and re-instatement of former linkages. As a long term objective, the historic civic core should be repaired when opportunities present themselves.

Rear boundaries to properties adjacent to the canal should be constructed of local materials, rather than generic materials, in order to preserve the local character of the canal.

15. NORTON

Fig. 37: View from bridge 22, looking east

15.1: Introduction

The landscape and character of the Caldon Canal at Norton is strongly defined by the valley through which it cuts. Agricultural land use has been consistent in this area for centuries. Consequently, the landscape setting is mature and established, and accommodates the intervention of the canal with graceful ease, whilst bearing testimony to a bygone rural idyll.

15. 2: History & Archaeology

The Caldon Canal conservation area in Norton is situated to the south-west of the settlement at Norton Green. The area fell within the parish of Norton-in-the-Moors, which was described by Ward in 1843 as, 'an extensive territory of rude and hilly ground, measuring about 3800 acres, within which are many good dairy and mixed farms, but the greater portion is bleak and barren'. This agrarian character is essentially preserved within the environs of the canal as it passes through Norton.

Norton has been settled since at least the Saxon period and appears in the Domesday Survey of 1086 amongst the lands held by Robert de Stafford in Pirehill Hundred. The find of a Bronze Age axehead (HER Principle Record Number 30054) c.150m to the west of the conservation area hints at earlier activity in the vicinity, the nature of which is unknown.

The parish of Norton-in-the Moors featured several small, dispersed settlements, including Norton Green, all of which probably originated as discrete medieval hamlets. The locally-listed Heakley Hall Farm, situated just to the north of the Caldon in the northern half of the conservation area is constructed on the site of a possible medieval moated platform (PRN 01540). A 1771 plan of the Norton estates of Charles Bowyer Adderley shows fields with the names Moat meadow and Mowing moat meadow adjacent to the farmyard. Furthermore, Ordnance Survey (OS) maps for the period 1878-1937 show a square, apparently moated

feature to the south west of the main farm buildings that may represent a remnant of the medieval platform. No diagnostic earthworks are visible in the vicinity of the farm today.

Norton underwent significant development during the post-medieval period due to the growth of coal mining and iron production in the area. Such growth can be seen in Norton Green on the north-western edge of the conservation area, which expanded from a ribbon settlement along the Burslem to Endon road in 1775, to a moderately-sized settlement by the mid 19th century. The 1843 tithe and 1878 OS maps of the village indicate the presence of collieries, an iron foundry (gone by 1878, although the present street name 'Foundry Square' betrays its former presence) and at least one lime kiln.

Despite the development evident to the north west, the canal corridor itself remained as farmland throughout this period. The 1878 OS map does, however, show some industry along the canal in the form of two limekilns, one situated adjacent to the bridge to the south of Heakley Hall Farm, the other located towards the southern end of the conservation area at Engine Lock. Both structures are described as 'old' on the 1878 OS map and neither is shown on the 1900 OS edition. Rather than cling to the main canal, development seems instead to have been attracted to a feeder branch, which extended north to the centre of Norton Green. The northern end of this feeder became the focus of commercial and residential development, including the creation by 1843 of an adjacent row of terraces along Frobisher Street (formerly Mayer Street).

15. 3: Historical and Existing Land Uses and Function

The route of the Caldon Canal cut through agricultural land, much of which is crossed by drains that feed into the River Trent.

Land uses within this area have remained relatively static for centuries. The development of Norton Green immediately to the north west does not appear to have encroached significantly upon the conservation area. As such, Heakley Hall Farm, built on the site of a possible medieval moated site, has probably represented the major point of settlement within the conservation area since the middle ages. The farm remains as a functioning remnant of agricultural land use within this area to the present day.

15.4: Character of the Built Form

Architectural Character, Materials, Colours and Textures

The architectural character in the area is mixed, due to the different periods in which the buildings were constructed. However, all of the built form can be described as modest. Red brick and rough hewn sandstone are materials that are commonly used within this stretch of the Caldon canal conservation area, with the brindled bricks providing textural interest.

Built Form & Massing

Isolated buildings are situated at irregular intervals within a rural landscape, ranging from one to two storeys in height, with a set back from the canal. The front elevations are orientated towards the access lanes for the most part, but the location of Drawbridge Cottage next to the tow path indicates a strong relationship with the canal.

Terraced housing occurs at the northern section of the canal feeder. Most of the housing is orientated away from the feeder in an organic arrangement but the terrace on Frobisher Street faces directly onto the former basin in a formal manner, suggesting that these properties resulted as a consequence of the development of the canal feeder. The properties are domestic in scale, comprised of two storeys. A small setback from the pavement defines private space from public space. A gap in the frontage suggests that a building has been demolished. Historical plans show an intact street frontage to Frobisher Street.

The arrangement of the main house and outbuildings at Heakley Hall Farm enclose the working yard. This arrangement is typical in respect of the traditional arrangement of agricultural buildings.

Listed and Unlisted Buildings of Importance

Heakley Hall farmhouse and the associated older out buildings are locally listed. Records suggest that the farm was constructed on a medieval moated site, elements of which may have survived into the mid 20th century. Although no longer evident, the elevated nature of the present farm building may reflect something of the topography of the former platform.

The style of the farmhouse and outbuildings is vernacular with a traditional cross plan to the main house. A central large chimney stack occurs on the western gable. Stone gables can be seen to the house and outbuilding, with stone quoins. Windows to the farmhouse have been considerably altered.

The outbuilding displays stone gables and plinths (with brick eaves detail), with brick used to construct the walls to the long elevations. The bricks look as if they have been hand made, due to their differences in texture. The roofs to the outbuildings are pitched and surfaced in clay roof tiles. Stone cills and lintels are still evident within the gable elevations. The barns display many traditional barn features, such as timber half-doors and shutters and panelled windows.

Fig. 38: Stone gable to farm outbuildings

A traditional stone boundary wall encloses a generously sized front garden and emphasises the elevated nature of the farmhouse. A second dry stone wall defines the approach to the farmhouse from Balls Lane.

Fig. 39: Elevated Farmhouse with garden boundary stone wall

Drawbridge Cottage is of red brick construction with blue brick detailing and a plain tile roof. Cambered brick heads define the window apertures. The property has been substantially altered over time, and historic plans show that originally there were two buildings on this site.

The terraced properties on Frobisher Street and canalside properties are simple and utilitarian in style. The original finish to the front elevations would have been brick, but modern interventions such as render now conceal the original brickwork. The terrace has a simple pitched roof of clay tiles, with chimneys that break the skyline. The scale and positioning of the windows has been retained for much of the length of the terrace, and original stone cills and lintels have survived.

Details and Features

Bridges 20 and 22 are traditional brick and stone cambered arch bridges. Bridge 22 has been capped with concrete to provide structural strength. Engine lock provides an example of historic engineering, which is named after a Boulton Watt steam engine that was used to pump water from a nearby colliery.

Bridge 21 is a metal drawbridge that is operated mechanically by a hand winder, in order to lift and lower the bridge to allow narrowboats to pass.

A brick arched culvert passes underneath the canal structure, to the east of the canal feeder. This structure was constructed to serve as a secondary culvert to the River Trent, should the first culvert become blocked, allowing water to drain away on the lower slopes within the valley flood plain

Fig. 40: View on approach to Bridge 20 and Engine Locks

Groundscape & Public Realm

Mature tree planting and grassed verges significantly enhance the quality of the canal-side setting. In a similar fashion, typical boundary treatments at Norton are soft in character. Native hawthorn hedging defines the edge of the canal towpath. The northern bank is open and low lying in character, but willows and alders help to define the edge, whilst maintaining ease of access to the canal edge.

Canal edges are mixed in character. Stretches of original stone edges remain in situ, showing the use of local stone to construct the original canal structure. Soft earth edges are also common on this stretch. Sheet piling has replaced the original canal edge at the mouth of the canal feeder. The use of sheet piling is unsympathetic to the semi-rural location.

Access routes to the canal are located to the north of the Caldon, providing access from Norton Green, although the original towpath associated with the canal feeder, linking directly to Norton Green is poorly defined and difficult to navigate due to vegetative overgrowth. Resin bonded paving and gravel is commonly used as paving in this area, reflecting the rural character.

The provision for seating opportunities is limited in this area due to the narrow width of the towpath, but seating is available at the Engine Lock. Notably, this area is litter free.

Fig.41: Original stone edging to canal edge

15.5: Ecology and Landscape Designations

The Caldon Canal is a designated wildlife corridor, of value for wildlife movement. The canal corridor in this area is an important green linkage from the open countryside and the Staffordshire Moorlands into the conurbation. Heakley Marshes is a local wildlife site that has been designated for extensive areas of marshy grassland habitat, with hedgerows adjacent to the canal. This habitat is species rich in flora and fauna, due to the absence of built form and natural landscape setting. Protected species commonly associated with marshland habitat include barn owls, bats, otters, and kingfishers.

15.6: Topography, Views & Enclosure

The topography slopes down from the north/north west to the south of the Caldon Canal at Norton. The canal is situated on the upper contours of the valley flood plain, with undulating topography rising in the fashion of a collar to the north/northwest.

Pleasant views of the surrounding greenbelt land to the north of the canal are clearly visible from the towpath, due to the rising topography. Views towards the lower slopes are partially screened by hedging adjacent to the towpath, but can be glimpsed over the tops of the hedges, with the opposite valley slopes forming a backdrop in the distance. The curvature of the valley contours and rising topography encloses the space, and terminates views. In this manner, Norton has a distinctive and local character.

Fig. 42: Rural view enclosed by rising topography

Isolated examples of historic built forms create a series of unexpected close range views that contrast with the surrounding wider landscape views.

In particular, Heakley Hall Farm holds visual appeal at close range. The elevated character of the dry stone walling defining the boundary of Heakley Hall Farm is visually striking. The stone gable of the barn forms a visually distinctive feature on approach from the footpath leading from the canal.

The traditional arched bridges, lock and draw bridge form local landmarks on this stretch of the canal, by virtue of their distinctive construction, combined with an absence of other significant built form in this area. The arched character of bridge 22 frames picturesque views of the greenbelt beyond, whilst providing vantage points for views of the surrounding landscape above the confines of the canal.

The meandering nature of lanes leading to the canal and rising topography restricts views into the canal.

15.7: Detractors, Neutral Areas & Gap Sites

Sheet piling lining the banks towards the canal feeder doesn't reflect the rural character of this location and looks out of kilter within the surrounding natural landscape.

Elements of existing seating, signage and the lock look neglected and would benefit from some care and attention.

15.8: Enhancement and Development Opportunities

Opportunities exist to create moorings next to the mouth of the canal feeder, where extra width occurs. The public footpath leading to Norton Green along the canal feeder would also benefit from an upgrade, to strengthen links between Norton Green and the canal.

In the long term, the re-instatement of the canal feeder to Norton Green would make a significant contribution to re-connecting Norton Green with the canal.

15.9: Pressures & Threats

Given the location of this area adjacent to the conurbation, there is a risk of suburban development, should demand for housing in the city increase. This would impact on the contextual setting of Heakley Hall Farm. Should development in this area be considered, the setting to Heakley Hall Farm should be preserved, with an approach of sympathetic conversion and renovation to Heakley Hall Farm.

Historic structures, such as the bridges and locks, need to be maintained for future generations. Reduced sums for canal maintenance may result in cheaper options being selected for repair that are not sympathetic to the historic character of Norton. Repairs to historic structures should be undertaken, using traditional materials and techniques.

There is also a risk that surviving traditional canal edge treatments may be replaced with steel piling. The traditional canal edge should be replaced as found, or a complementary soft canal edge be re-instated, to accord with the natural greenbelt setting and help with wildlife transmigration.

15.10: Summary of Special Interest

The locks & bridges provide evidence of the technical prowess of industrial engineers during the 18th century.

Many agricultural holdings were lost through industrial development adjacent to the canal. Heakley Hall Farm is a rare surviving example of a traditional agricultural holdings abutting onto the canal with a setting that has remained relatively intact. Heakley Hall Farm, and the associated landscape setting, should be maintained, and the functional relationship of the outbuildings and enclosed yard should not be compromised by future development.

The buildings on Frobisher Street provide an example of settlement due to the canal. Over time, the terraced nature has been eroded, but the historic alignment adjacent to the canal basin is still evident.

The stone edged treatment to the canal is also intact, and illustrates historic methods of construction adjacent to the canal.

15.11: Recommendations and Proposals

The locks and bridges should continue to be maintained, using historic methods, so that they remain fully operational.

Heakley Hall Farm should be preserved, with sensitive repairs undertaken to the outbuildings.

The building line of Frobisher Street should be repaired and retained.

The canal feeder should be re-instated, to re-connect Norton Green to the Caldon Canal.

The historic canal edges should be preserved or replaced in a similar fashion.

Fig. 43: Rural landscape setting to bridge 22