York city centre
Access and Mobility Audit
Summary Report

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and Ross Atkin

cae Centre for Accessible Environments

1 Introduction

York Council is carrying out a redevelopment of the city. The city's aspirations are to create a world class city based around its principal significances. A fundamental part of this process is to ensure that the city centre is truly accessible to all, both physically and intellectually

CAE were appointed to carry out an access and mobility audit for York centre that would deliver the necessary understanding as well as clear recommendations for minimum design standards and action to be implemented as part of a public space strategy; the city centre area action plan and other proposals for improving the city centre.

Our audit was based around key issues identified by York Council; coach travel, streets and spaces, street furniture and clutter, heritage and other cultural attractions, Blue Badge parking and Shopmobility.

Our observations highlighted a number of key challenges around improving the public realm environment for disabled pedestrians and wheelchair users.

- The difficulty of accommodating vehicular traffic and,
    - providing direct and convenient routes from the train station and coach parks to shopping, historic and cultural attractions
    - providing a safe and enjoyable environment for tourists and shoppers within the city centre, including convenient pedestrian crossing facilities
    - providing suitable routes between linked historic and cultural features such as different sections of the city Walls, and separate parts of the riverside walks
- Within footstreets,
    - the tension between providing vehicular access for Blue Badge holders and a safe and conducive environment for street users on foot and in wheelchairs.
    - deliveries for retail premises in narrow footstreets while not compromising of the pedestrian environment
    - accommodating needs of some visually impaired people in level surface streets and public spaces that are preferred by many mobility impaired and visually impaired people
- The challenge of maintaining the historic character of the Walls and at the same time providing a safe environment for people
- Providing well-maintained public toilets that are accessible to all

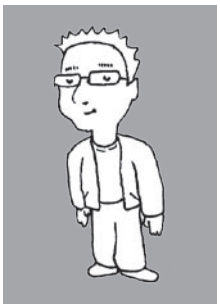
We have produced a report outlining the current issues and with recommendations for improvement based on current inclusive design and best practice standards.

2 Methodology and consultees

CAE identified a number of stakeholder groups with the assistance of York's Equality Advisory Group and with the participation of a number of groups and individuals carried out a number of street journey audits over five days from 13 to 15 August and 23-24 August 2012. We also interviewed a number of tourists and visitors to York, and many disabled people on the streets who were happy to provide their experiences and views. These audits and surveys were conducted and facilitated by Brenda Puech and Ross Atkin.

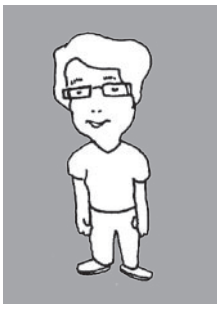
In addition we provided groups and individuals who were unable to make the street audits with the opportunity to feed into the process by providing information electronically.

In order to protect their identities the names of audit participants have been changed.



Marcus

Marcus has limited mobility, has balance issues and tires easily. He 'not enjoy walking along Walmgate, it makes [him] not want to go out'. His biggest issues are with narrow and crowded footpaths, signalled crossings in multiple stages across the arms of junction to get to the other side (he prefers single stage crossings), uneven paving and crossfalls and finding places to sit down to rest. He would love to visit the city Walls but the only time he did so he was extremely nervous of the drop and the lack of edge protection on the walkway. 'If safer, I would appreciate the views'.

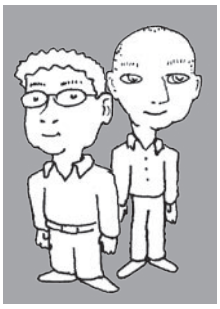


Charlotte

Charlotte has a partial sight impairment and is very independent. She has difficulty predicting level changes and often trips. She also has difficulties with the amount of vehicular traffic in the city centre and needs support to cross busy roads.

Rosa

Rosa is a wheelchair user who needs support with eating, drinking and personal care. She regularly visits the city centre using buses and trains. Access to suitable toilets is a major concern. She needs access to suitable parking. She communicated with us by email.



Barry & Jacob

Barry and Jacob, both members of the York Older People's Assembly. Neither have any specific mobility impairments but were able to articulate the views of the assembly members. They expressed a desire for more soft landscaping and planting in the city centre. They had issues with some signalled pedestrians crossings, particularly the one on George Hudson Street/ Micklegate and Nunnery Lane junction. Signage above the eyeline for pedestrians, was also frequently a problem. They also had issues with the volume of Blue Badge parking and vehicles travelling around searching for parking within the footstreets.

Sandra

Sandra has Rheumatoid Arthritis and is a member of the local support group. On a good day she is able to walk around with a stick, on a bad day she travels in a wheelchair pushed by her husband. Her greatest difficulty is with the cobbles which cause her joints discomfort when on foot and in the chair. When she is in the chair the lack of dropped kerbs and the narrowness of the footways on streets like Colliergate are problematic, as are the drainage gulleys on streets like Coney Street. Though a regular visitor to the centre and a Radar key holder, she had not noticed there was an accessible toilet in Sampson Square due to poor signage.

Paul

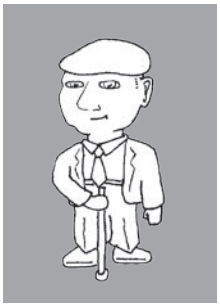
Paul is a cyclist with reduced mobility, a member of the York Access Group and his special task is to keep an eye on Shared Path Access and their accompanying street crossings. His main issues are high vehicle speeds and he is keen on a 20mph speed limit in York and more priority for cyclists at road crossings.

Anthony

Anthony – an electric wheelchair user, lives in Bootham and regularly travels to city centre to shops and to cultural venues. His main issue is an inadequate number of wheelchair accessible taxis in York. Other issues are poor footpath surfaces and narrow widths, discontinuous footpaths with dropped kerbs and crossovers. He prefers to use the carriageway which has smooth tarmac, and finds the cycle path a useful facility on the street. He visits a number of historic cultural attractions and is disappointed at the lack of access to and within these.

Amy

Amy has no usable sight and uses a guide dog. Apart from the crowds her main issues were becoming disorientated in the open space of the squares (St Sampson's, St Helen's), dealing with uneven paving and unpredictable level changes (drainage gulleys, kerbs, camber, ramps), and negotiating footway obstructions like 'A' boards. She would prefer all the foot streets to have a single level surface with the footway consistently demarcated from the road with tactile paving (her preference would be blister). She would like to see the 'A' boards removed and the fairground on Parliament St moved from on top of the tactile crossing point.



Charlton

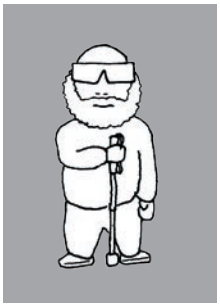
Charlton has significant sight loss though relies primarily on his residual sight to navigate. He carries a guide cane which he uses to check for level changes and for occasional support. He also has difficulty walking long distances. His greatest difficulty is with uneven paving, especially where the road surface is paved with setts which can be vibrated by idling vehicles. He is keen on retaining the kerbs on the foot streets because he sees them as an effective barrier to traffic. He feels the same way about bollards. He would like more seating which was easier to get in and out of and was either not positioned under trees or was wiped down once a week to remove bird droppings.

Clive

Clive has lost the lower part of both of his legs through diabetes. He travels in an electric wheelchair. His greatest difficulties are the infrequency and steepness of dropped kerbs and the narrowness and camber of many of the footways. He frequency finds himself travelling significant distances in the carriageway including on heavily trafficked roads. He concedes that having a level surface on the foot streets would be helpful to him but he does not feel it justifies the expense.

Margaret

Margaret is partially sighted and has roughly 10 percent of 'normal' vision. She uses no mobility aid and is totally colour blind. She has trouble seeing approaching pedestrians, cycles and vehicles soon enough so her biggest issues are with the segregation of vehicles and cycles from pedestrians and with crowded footways. She would like to see better controls on cycles and fewer shared use areas.



Daniel

Daniel is registered blind but has a small degree of usable vision. He uses a long cane. His biggest issues are with footpath obstructions such as parked vehicles, 'A' boards and cafe tables and chairs. He would like to see stricter enforcement to keep footpaths clear, especially of parked vehicles, as well as rotating cones on the left side of controlled crossings.

Paul & Maud

Paul and Maud were visiting York on holiday. They both have trouble walking and travel predominantly in mobility scooters which they brought to the city in the boot of their car. Their main difficulties were with navigation, finding appropriate places to mount and dismount the footway and dealing with paving cambers and slopes.

Alan

Alan has some light perception but no usable sight. He uses a guide dog and is a frequent visitor to the city centre. He has no difficulties navigating or orientating himself for him 'the streets of York are quite accessible, no problems as far as I'm concerned'.

Other than the above, we interviewed a number of shoppers and visitors to the city, including UK based and foreign tourists arriving by coach. Some were unfamiliar with York, there were many older people with mobility impairments, and families with children.

We interviewed day visitors arriving by train to meet in York for tea and shopping.

We also conducted telephone conversations with a number of stakeholders including Shop-mobility, who could not take time off to attend a street audit.

We also conducted our own street audits, taking notes and observations.

3 Summary of key issues

3.1 Coach and train travel

Locations

Both Union Street and Foss Island coach parks are located a short walk away from the main tourist attractions of York Minster and the shopping areas. Foss Island coach park is additionally close to Clifford's Tower, Fishergate Tower which gives access to the city Walls, and to the riverside walk.

The train station is located centrally, only a few hundred metres from the entrance to the city Walls and less than a mile away from the city centre and York Minster.

Facilities

Both coach parks have a central facilities block that has toilet facilities, including a wheelchair accessible facility. Union Street coach park has a large uncovered seating area. The train station has standard facilities including free to use toilets, seating and shopping facilities.

Information

The tourist information signage in Foss Island is located centrally within the coach station which makes it convenient and comfortable to access before one sets off on one's journey. The corresponding signage for Union Street is across the road from the coach park on a footpath on the corner of a busy junction. This is not a comfortable viewing position in a circulation area due to the number of people passing along the footway.

In the station, the signage is in a prominent place on the exit from the station in the indoor concourse.

None of signage boards provides information at a lower level for people of short stature or those seated in a wheelchair.

A fee of £1 is charged for the provision of a tourist map of York which is a deterrent. A printed map should be unnecessary for most people, given the close proximity to the centre and the visual orientation clues provided by the Walls, the river and the Minster. In addition the station itself is not visible on the sample map that hangs on the wall, making it difficult for visitors to establish the correct route to their destination.

Routes to the centre

Both coach parks and the train station have routes to the city centre and tourist and shopping attractions that provide a poor quality pedestrian experience.

- they are not signed adequately
- they are dominated by motor traffic that obscures key orientation views and is a source of distracting noise, pollution and danger
- footpaths are narrow and congested and often have a poor surface and steep camber compared to the roadway
- crossing points are inadequate
- guardrailing further constrains pedestrian movement and increases crossing distances.

While there were large coach parties from Union Street coach park on Gillygate and groups of tourists travelling from the train station to the city centre, there were very few groups visible on the road from Foss Islands coach park - which could be a reflection of the pedestrian environment. Most of these would head for the city centre via the riverside walk.

Vehicle dominated route from Station towards the city centre

Specific issues with each include:

Train station and city centre via Lendall Bridge

- traffic dominated, forcing pedestrians to take detours. The one-way traffic gyratory between the two walled gateways is a barrier to pedestrians with long detours required
- the more direct and attractive route via the Burial Ground is not signed and peters out with no footpath provided after the monument beyond the city Walls
- there is poor pedestrian permeability with routes suddenly cut off without warning with guardrailing and large cobbled surfaces to deter pedestrians Eg.The pedestrian route to the city Walls cannot be used to get to Lendall Bridge and the city centre (without climbing onto the walls themselves).
- poor pedestrian amenities include narrow footpaths, staggered and guardrailed crossings and poor side road crossings Inadequate wayfinding and signage and confusing routes

Union Street coach park

- the coach station has a short and direct route to Bootham Bar and the Minster, but along a narrow footway on one side of heavily trafficked Gillygate that is only 1.3 metres wide in places and has inadequate crossing points to the wider footway on the other side of Gillygate
- the footpath has obstacles including wide side road junction flares, cobbled crossovers, bollards and traffic signposts restricting the available width
- there is a difficult signalled pedestrian crossing at Bootham Bar which is extensively guardrailed and requires some detours from desire lines. Crossings to the city Walls or High Petergate leading to the Minster can involve up three crossing stages across guardrailed pedestrian refuges (which often become overcrowded)

Pedestrian crossing island, Rougier Street

Gillygate with visitors from Union Street coach park

Bootham Bar pedestrian crossing

Foss Islands coach park

- Poor signage but good access to the river-side walk. However there is no information provided to indicate that the walk involves stepped access and a long detour to get to the city centre
- The routes via the road level to the city centre and historic attractions of Clifford's Tower and the city Walls (Fishergate Tower), which are in close proximity, can only be described as providing a hostile pedestrian environment. The extent of guardrailing and the lack of crossing points on Skeldergate Bridge, Tower Street or Fishergate, force pedestrians to go hundreds of meters out of way of the direct route to Clifford's Tower, the shopping streets or Fishergate Tower. This causes considerable disorientation and discomfort in addition to the extra distance to be covered. This is especially difficult for mobility and visually impaired visitors. The routes are described in more detail below
- Only one side of the exit road has a footpath. If you use this footpath on the left you are led left via a fully guardrailed footpath around a traffic roundabout and then onto Skeldergate Bridge. From the roundabout you can view Clifford's Tower which is just across from the roundabout but there is no crossing point visible to get to it. The footpaths either side of Skeldergate Bridge are guardrailed up to its centre but fast moving traffic encouraged by the guardrailing of the roundabout and bridge deters any crossing movement on the Bridge. A crossing is finally provided some distance from the other end of the Bridge after the junction of Bishopsgate with Terry's Avenue. To get to Clifford's Tower and to the shopping area, one would then need to cross back over the Bridge and take a left turn again circumnavigating the roundabout on a guardrailed footway. Much further down Tower Street, there is a direct crossing to Clifford's Tower and Tower Street leads to a more pedestrian friendly shopping area of Clifford Street and entrance to the footstreets.
- If you exit right from the street entrance to the coach park, you are led past the wide mouth of the junction onto a guardrailed footway adjoining the dual carriageway that leads over a canal bridge to Fishergate dual carriageway with a raised median strip in the middle. From here you can view Fishergate Tower the entrance to the city Walls across the road, but there is no crossing point here. You need to walk way past the Tower until you get to the crossing of Fishergate with Foss Island Island Road quite a distance further down. There is a two stage signal crossing here that leads to the other side of Fishergate and then a long walk up the other side of the Fishergate to reach Fishergate Tower.

Exit from Foss Islands Coach Park

Riverside exit from Foss Islands Coach Park

3.2 Footstreets and city centre

It should be acknowledged that York city centre, especially the footstreets, despite all of the issues presented below represent a relatively accessible environment. Abundant evidence of this is provided by the areas popularity with older and disabled people. It is likely that the traffic limitation measures in place during the footstreets hours, whilst not without problems, are a major contribution to this popularity.

There are broadly five types of street environment found inside the ring-road:

- Streets with traditional kerbs and carriageway (such as Goodramgate)
- Streets with a combination of kerbs and level surfaces (such as Davygate)
- Streets with a level surface and an open drainage gulley (such as Coney Street)
- Squares (such as St Helen's, St Sampson's and Kings Square)
- Heavily trafficked through routes (such as George Hudson Street)

General issues

Maintenance of surfaces

This was the most common issue highlighted by all consultees. Uneven surfacing caused problems to people with mobility and visual impairments and many would often prefer to walk on the asphalt in the roadway because of this. Some of the most uneven and dangerous surfaces were found on the areas of the roadway which are paved with setts (Market Street, St Sampson's Square).

'[The paving] It's awful here, It's shocking all the way along, I'm very brave to do this... It's all bumpy and bits sticking up and slopes'

Amy, St Sampsons Square North side

'It is a very difficult area for wheelchair users this one, you've got different levels and even the flatter surfaces aren't particularly flat. Plenty of potentials for accidents'

Sandra, King's Square

'I'll ride along tarmac trenches that have been made up again and they're smooth, where most of the road's rough, like Kings Square, around there. So I'll follow a trench, you can't always because of traffic and people... If there is something coming I'll pull into the side and let 'em past'

Clive

Colin follows a trench to avoid poor road surface

'I'm fearful of falling. If I fall it will be a broken bone and that will mean hospital and most likely never coming out in the world again.'

Charlton, Parliament St

Cracked and missing pointing, Colney Street

Types of surface

For many participants some of the surface types found in the city centre were problematic. Extensive areas of cobbles were mentioned frequently as were the decorative cobbled strips found for example at the south end of Parliament Street. Tactile paving was also mentioned by some participants as slightly problematic.

'There are lots of cobbled areas around York especially by the market which are extremely inaccessible for disabled people. It's very hard to get a wheelchair down and also it's very painful if you've got conditions like I've got to walk on the cobbles. I can understand the Shambles wanting to keep their cobbles because it's part of the historic nature of that area but there are other areas where I feel it's a hindrance and also a potential source of accidents'

Sandra, cobbles

'It's slightly uncomfortable because I have joint problems so any kind of bumps and vibrations sort of shoot into my joints. It's slightly better than the cobbles. The cobbles are a real problem'

Sandra, tactile paving

Diagonal patch of cobbles, Peasegate

'I don't know why that's there really. If you're in a wheelchair that's a problem'

Sandra, diagonal patch of cobbles on Peasegate

'It goes right through my body, affects your head, it's like a tremor'

Clive, tactile paving

Surface with unpredictable camber where Susan and several others have fallen, Fossgate

Slopes and cambers

Steep, uneven and unpredictable crossfalls were also a problem for those using wheelchairs, stick users or anyone not totally confident on their feet. These were exacerbated at crossings where steep and uneven dropped kerbs were a major barrier to people mounting the footway and a hazard to those encountering the crossing point as they passed along. Wheelchair users were observed to lose control of their chairs as they passed some crossing points due to the steepness and undulation of the surface. Susan pointed out a particular dropped kerb area at the corner of Fossgate and Pavement where several members of her rheumatoid arthritis support group, including herself, had all fallen due to the undulating and unpredictable gradient of the paving.

'It's hard because the bevel on the footpath is greater than it should be, it keeps varying'

Charlton, Goodramgate

'When I go up Coppergate I'm on a slant'

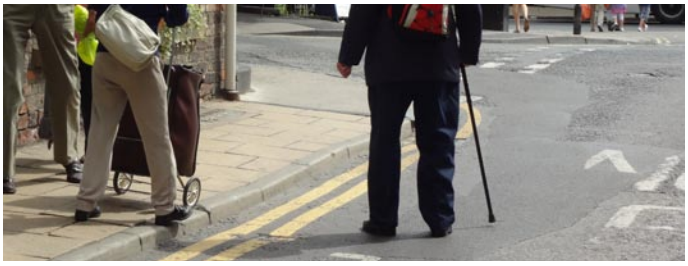
Anonymous rollator user

'Here, we've had to walk on the road because it slants the pavement and you're forever trying to hold onto him'

Anonymous woman pushing a wheelchair, Coliergate

Widths of footpaths

The crowded conditions and congestion on the pavements was cited often as a major barrier by almost all participants to the point where some would avoid the town centre during tourist seasons. People with learning difficulties also found this a major barrier and a source of discomfort.



Narrow footway, Fosgate

Obstructions

Bus stops on narrow footpaths, 'A' boards, temporary erections like cafe tables, fun fairs and market stalls as well as signposts, guardrail and other street clutter all exacerbated the congestion of footpaths. A-boards on footpaths were the most frequently cited obstruction, especially by those with visual impairments and those using wheelchairs. The next most problematic issue was other temporary erections such as cafe tables and market stalls. Some participants also cited bollards as a problem however for others they presented a reassuring barrier to vehicles and something to grab if they felt unsteady. The most problematic bollards were those positioned on very narrow footways (such as on Market Street).

'A' board obstructs David on Spurriergate

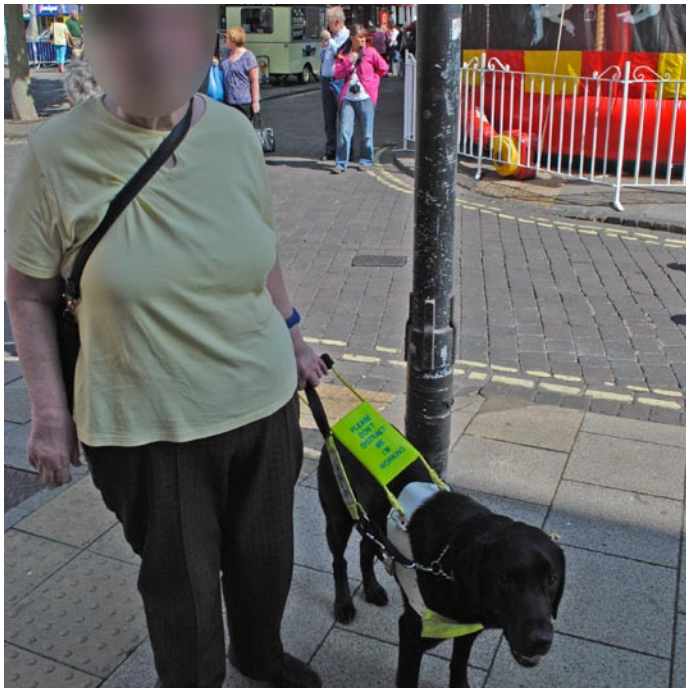
Observations showed that pedestrians had to frequently walk on the carriageway or walk sideways to pass each other whilst participants with visual impairments and those using wheelchairs were often observed colliding with other pedestrians especially these looking at shop windows.

'[When I'm in the wheelchair] It can get very busy down here and because it's so narrow and the pavement can get very crowded and you often end up on the road which is not very safe.'

Sandra, Colliergate

'The pavements are so narrow if you get two abreast you've had it haven't you'

Amy, Market Street



Funfair on top of tactile paving, Parliament Street

'The funfair obstructs the getting across because we work to the tactile bit, that's what we head for and we can't get across because the fun fair's there'

Amy, St Sampson's Square S side / Parliament St N end

'When they have the continental market it would be nice if there was a way for people with wheelchairs and baby's prams to be able to get through without knocking people over'

Sandra, Parliament St

'Where you've got high kerbs, I fall off, I'm in hospital... so I like to keep on t'inside if I can... so then I knocked that sign ['A' board] over'

Clive, Walmgate

Guardrailing

was not specifically cited as an obstacle by participants, but was observed to be an obstacle forcing pedestrians away from their desire lines, and also narrowing the available width of the footpath while not permitting the natural overflow onto the carriageway.

Crossings

Crossing opportunities within the times of operation footstreets were not an issue (aside from the physical difficulties mounting and dismounting the footway discussed above), as the volume and speed of cars was low enough not to create a hazard. However, crossings into the foot streets from neighbouring roads, and crossings of the heavily trafficked through routes were more problematic. Generally controlled crossings were constructed in line with national guidance with correct blister paving installation and tactile rotating cone or audible warnings.

Cross-road signalled crossings required pedestrians to cross two or three arms of a junction separately in order to reach their destination. Matthew asked why it was necessary for pedestrians to have to do this rather than requiring cars to wait for them to cross on their desire line and why pedestrians could not cross in a single stage. However David expressed a preference for only crossing one stream of traffic at a time.

Pedestrian Island, Museum Street

"[it is good] because it's split in the middle... you've only got to go across one stream of traffic"

Daniel, Museum Street

Guardrailing was used to reinforce crossings that were not on the desire line, requiring pedestrians to go out of their way, and also narrowing the footway that they are forced to travel along.

Side road crossings were also unsatisfactory where there were raised footpaths. Many of them had steep dropped kerbs that were a tripping hazard for those with mobility and balance impairments, and a tipping hazard for wheelchairs, In addition there are wide junction splays that increased pedestrian crossing distances, allowed vehicles to speed in and out of junctions and require pedestrians to look back a long way for turning traffic.

Excessively wide junction splay and incorrect tactile paving instalation (tail implies controlled crossing)

"Too much of a lip, I won't get up it. It's not down to t'tarmac is it? it doesn't meet the tarmac"

Clive at dropped kerb (side road), Walmgate

Crossovers

Crossovers for vehicles into private premises over footways are poorly formed with steep gradients and poor surfaces that are frequently cobbled. These inconvenience those proceeding along the footway.

Cyclist 'scooting', Colney Street

Cycling

Cycling in the footstreets was perceived to be a problem, particularly by mobility and visually impaired people. The presence of cycle parking within the footstreets was seen to encourage people to cycle up to the parking places.

Operation of footstreets

Time of operation

Consultees prefer the time of operation of the foot streets to be extended and the rules to be made clearer to both pedestrians and drivers. It was reported by audit participants that traders in some of the streets bordering the footstreets, such as Fossgate, wanted to be included in the footstreets.

Blue Badge parking

Participants reported conflict with those requiring parking within the centre and those inconvenienced by parked cars and the constant movement of vehicles searching for a place to park. Most participants acknowledged the usefulness of Blue Badge holders being able to enter and park in the footstreets.

'I had my husband very poorly for a while and he couldn't walk any distance because of his breathing. he had a Blue Badge and that was invaluable because he could park just up there and walk in. He wouldn't have made it from the car parks.'

Margaret, Davygate

'City centre parking is good for Blue Badge and green permit holders but needs to be kept not taken away or reduced as it is more difficult since parking outside the Library is down to only two places now.'

Rosa

However some participants felt that those parking could do so more considerately, not for example parking in front of dropped kerbs.

'I know it says you can park anywhere if you've got a Blue Badge, but like if you park there [In front of a dropped kerb] you're being unreasonable'

Clive

It was noted that signage indicating dead-ends, or one-way streets was inadequate which meant cars had to make U-turns in the street which was not always a safe manoeuvre.

'We got lost the other day, finished up in the pedestrian area with the car... We never saw any signs that said we couldn't take the car... and then you realise that you're in a pedestrian area, and then it's how do we get out of here?'

Paul & Maud

Seating

The available seating in York town centre is extremely well utilised to the extent that it can often be difficult to find a free space, particularly in the summer months. There is no seating at all on some of the busiest and longest shopping streets such as Colney Street and Spurriergate making them much less accessible to people who tire easily.

Sandra sits an a seat on Parliament Street

There are three designs of seat commonly in use, the back-to-back seats found on Parliament Street, the contoured slatted seats found on King's Square and the backless benches found on St Helen's Square. Seat height varies between 420mm and 450mm with no seats having arm rests. The combination of relatively low seat height, a lack of arm rests and in some cases a sloped back attitude makes this seating relatively difficult to get in and out of.

"It can be difficult, this isn't too bad, you do find lower ones, but it can be a bit of a struggle to stand up, and this is a good day"

Sandra, Parliament Street

Sandra compared all three types discussed previously and found the flat benches on St Helen's Square the easiest to get up from.

All the seating overhangs its ground level profile significantly meaning that it could cause a long cane user to collide with it, however this occurrence was not observed in the shadowing nor mentioned by the long cane user who participated.

Seat, Parliament Street

Public toilets

Issues included insufficient numbers, insufficient signage to existing ones and limited hours of operation.

Visitors preferred using toilets in department stores such as Marks and Spencers, as they were more confident about maintenance and cleanliness of these.

The toilet in St Sampson Square was not well known due to poor signage, but was essential for the wheelchair users and others who did use it.

Many spoke about cities that paid stores incentives to provide toilets for public use and wished that this could be replicated in York.

Street types

Streets with traditional kerbs and carriageway

The most significant issue with these kinds of streets was the narrowness of the footways (as discussed previously) and the infrequency of dropped kerbs. These factors combined to lead many participants, especially those using wheelchairs to conduct much of their journeys in the carriageway, including on streets not covered by the footstreets traffic controls.

'There are not enough dropped kerbs and where they are they are not very even they need repairing'

Sandra

Wheelchair user in the carriageway, Low Petergate

On some streets such as Ogleforth the footways are so narrow that it is virtually impossible for a wheelchair user to mount the footway even where dropped kerbs are provided.

Colin attempts to mount the kerb, Ogleforth

'Nope, inaccessible, it's no good at all to me'

Clive, dropped kerb on Ogleforth

Streets with a combination of kerbs and level surfaces

These streets were easier to use for people using wheelchairs because the frequent level areas (usually where the carriageway is raised to the level of the footway for several metres) provided convenient crossing areas. The situation presented another problem however. For many participants (not just those with visual impairments) it is difficult to predict and judge where level changes will occur, creating a high risk of falling. For some participants with sight loss the lack of demarcation between the carriageway and the footway on the level areas was also a problem.

'This is a classic because it blends with t'road so you could easily go off'

Clive, St Sampson's Square

Change from kerbed to level surface, Davygate

'I could get caught on that. You can only see it from here [in carriageway]. You don't see it when you're standing on the pavement.'

Margaret on Davygate

"As you get older you're wary of steps, as in tripping up them and big steps falling down them."

Amy

Level surface streets

Level surface streets proved popular with many participants because of the relative ease of moving and off the footway. For some participants with visual impairments the shallow drainage gulley provided a useful indication of the edge of the footway, however it was also identified as a hazard or obstruction by almost everyone.

'It's a guide... [are you using the gulley for orientation?] as much as anything, yes'

Daniel, Colney Street

Dovid follows the drainage gulley with his cane

'These things [drainage gulley] are a real nuisance if you're in a wheelchair going from one side to the other because you dip down and then have to get up again'

Sandra, Colney Street

Squares

The three main squares within the footstreets area were generally popular with participants but each had its specific issues.

St Sampson's Square has a traditional kerbed layout, which made it easier to navigate for some participants with visual impairments. An infrequency of dropped kerbs, particularly to access the central area was cited as a problem by some participants especially as they were often obstructed by parked cars.

'[cars] park right there, dead aligned t'run-up, so where do I go then?'

Clive, St Sampson's Square

St Helen's Square has a level surface. There is no formal tactile demarcation between the carriageway and footway however there is a change in surface texture which some visually impaired participants were able to pick up. Anne, a guide dog user was observed becoming totally disorientated within the square due to this lack of demarcation.

'This is St Helen's I can tell by the surface... It's not that useful, it could do with the bobbly bits... You can't tell if you're on the road or not, I can just about tell but it could do with a proper marking, like bobbles, those tactile paving'

Amy, St Helen's Square

The cobbles in St Helen's Square were the ones most frequently identified as problematic by participants.

King's Square has a mixture of level surface areas and kerbs. This combination of different surface types leads to the same issues participants face on the streets with this configuration.

Heavily trafficked through routes

These streets mark a very significant contrast from the pedestrian dominated environment of much of central York. They are dominated by traffic and represent significant arteries across the city as well as the main way people are able to access the city centre by bus. Their effect of severing the connections of different parts of the city centre is barely mitigated by controlled crossings which are often poorly sighted away from pedestrain desire lines.

Issues include:

- narrow and crowded footpaths
- bus stops further obstructing narrow footpaths
- crossings often guardrailed and not on desire lines, leading to detours for pedestrians, jay-walking and congestion on pedestrian refuges

3.3 Heritage and cultural attractions

city Walls

Access

Access is currently via stairs at the Bars and Towers, except for one step-free access point at Lendall Bridge.

More could be made of the step free route which provides access to a short but interesting part of the Walls. This section is provided with seating and has significant views over Lendall Bridge and the Minster. This could be better signed, and wheelchair users should be welcomed here rather than deterred. A vehicular drop off point could be created at the entrance to the Walls here.

Further opportunities need to be sought to create step-free access via a lift, such as at Lord Mayor's Walk or Nunnery Lane, where there is a car parking area directly below the Walls.

Walkways

Walkways are in general smooth, level and firm, paved with stone flags and adequately wide at 1.2m average width.

Walkway on city Walls

The frequent level changes along the walkway are overcome by steps rather than ramps, which makes the walkway unsuitable for wheelchair users or those with pushchairs or rollators. It would not be feasible to change this feature of the walkways. However, stick users and other mobility impaired people could be assisted by providing more frequent handrails along the steps at both sides. Step nosings also need to be highlighted, especially useful for visually impaired people.

The edge of the walkway is bounded on one side by a solid stone wall, with occasional cut outs that provide viewing points. However, on the other side there is limited edge protection. A few sections of the Walls do have guardrails that are 1.1m high on the open side, but this is limited to some areas only. The walkway can therefore be intimidating and daunting for some people, including those with learning difficulties. It is recommended that a section of the walkway is provided with a kerb upstand and suitable guardrailing 1.1m high that includes a handrail at 900 - 1000mm high. The section may need to be provided with a solid guarding that blocks the low level view for those with vertigo. This section needs to be highlighted as a safe section of the Walls for those too nervous to walk along the more open sections. It needs to be a part of the Walls that provides good views and should be provided with adequate interpretation.

city Walls walkway and seating

Resting places and vantage points

There is occasional seating provided along the walkway. There are also places where the walkway widens and provides a vantage point to view the city or just a resting area. These are located at places where the views from the Walls are particularly good and therefore a popular place for visitors. Often there is a short flight of steps to reach the viewing area – these are not provided with handrails or nosings to the steps.

There is not always seating provided in these widened sections, or at the top of the steps in these areas which is important for mobility impaired people. It is recommended that more seating is provided particularly at vantage points.

Toilets

There is one set of public toilets provided along the Walls at Bootham Bar, and one toilet within a private café within the Walls at Walmgate Bar. The toilets are provided at the base of the Walls. However, these are not adequately signed. The location of and distance to toilets should be indicated at regular intervals along the Walls.

Recreational opportunities

The sides of the Walls are grassy embankments and often extend into an extended level area of green running along the base of the Wall. These areas of green are cut off from the rest of the city by the Ring Road and are difficult to get to. However, where they are used they provide a popular amenity for rest and recreation. People were observed taking a break from work, having a picnic, taking dogs for a walk and children were observed using the steeper embankments as a slope to slide down on makeshift sleds. These areas provide a significant untapped recreational resource for the city and much more could be made of this resource by the provision of suitable crossing points and regular seating at the very least. Further consideration could be given to provision of concessions for food and drink kiosks, interpretation opening out access for parties of tourists or school children.

People using green space between ring road and wall

Interpretation

There are a number of interpretation boards along the Walkways. There are also information and interpretation boards at the base of the Towers where the stairs to access the walkways are located.

Bars and Towers

Setting and access

Towers and Bars provide access to the Walls and are spectacular architectural and historic features in themselves. They are not set off to their best advantage as they are located on narrow footpaths off the busy ring road. Some of them are difficult to get to, such as Fishergate Tower which has no crossing to get to it across the multi-lane highways of Piccadilly or Fishergate. Even where there is a crossing provided, there is no sense of place provided by the setting which is dominated by vehicular traffic, both passing by the Bar or passing through it. There are interpretation boards at the base of the staircases to the Towers, but these could be made more prominent.

Walmgate Bar crossing

Continuity across Bars of the Walkway route: At Walmgate, Fishergate and Bootham Bars there is a break in the Walkway and visitors need to descend one side of the Bar via set of stairs, cross a vehicular road passing under the Bar and re-enter via a set of steps on the other side. The pedestrian route across the Bar is compromised by vehicular priority through the Bar, which has led to restrictions placed on pedestrian movement via guardrails. At Walmgate the only way of crossing the Bar is to use a signalised pedestrian crossing, controlled by guardrails, which does not provide a pleasant or comfortable crossing.

Information and wayfinding

There is little information provided to visitors about the length of the walk to the next exit, the nature of the walkway, where the next exit may be, or what attractions it may lead to.

A visitor remarked on her way back to the train station from the city centre via Lendall Bridge : "I would have tried to access the Walls, but was not sure how far or how long to the next exit"

There is also very little information and wayfinding between the different sections of the Walls.

Where the Walls are not continuous there are sections of the Ring Road to travel along to reach other sections of the Wall. There are two main breaks in the route

Between Baile Tower to Fishergate Tower

This route is particularly difficult and unattractive. There is very poor signage to the next section of the Walls.The length and direction of the route depends on which side of the road you decide to walk along as there are limited crossing opportunities once you choose one side.
If you stay on the side of the Walls, the route across the northern side of Skeldergate Bridge is problematic as:

- it requires an extensive detour via the bottom of Clifford's Tower where a two-stage signalled crossing is provided to Tower Street
- other crossing opportunities are closed off with extensive guardrailing that starts on the Bridge
- side roads that need to be crossed, such as crossing at base of Clifford's Tower and at Piccadilly junction with the Ring Road, have poor crossing facilities with large junction radii and multiple stage informal crossings

If you cross over to the southern side of the bridge, the route is marginally shorter, but also involves extensive detours.

- there are no opportunities to explore other historical sites such as Clifford's Tower in reasonable proximity, but situated across a busy roundabout that provides no crossing facilities as is completely guardrailed all round.
- While Fishergate Tower is in close proximity across Fishergate Road, there is no crossing opportunity to reach it across the dual carriageway. Visitors wanting to make the effort would have to walk around 100ms to the bottom of Fishergate at the junction with Paragon Road and use the two stage crossing there and then walk back up about 100ms on the other side of the road to the Fishergate Tower. This is an unacceptably large detour, making this journey disorienting, difficult and unattractive, particularly to people with mobility impairments.

Trapped in by railings - towards Fishergate Tower

For both routes

- they are poorly signposted
- the footpath to the side of Brownie Dyke bridge is guardrailed and narrow at only 1.0m
- the footpath passes along Fishergate dual carriageway which is not a pleasant walking environment due to traffic noise, fumes and danger

Between Red Tower to the entrance at Peasolme Green

The route between the Red Tower and the Peasolme Green entrance is another poor quality experience:

- at Peasolme Green the route involves a complex crossing in four stages with two staggered guardrailed pedestrian refuges in a multi-lane traffic gyratory
- it is poorly signposted
- the footpath is an unattractive one along a busy ring road with few resting opportunities
- side roads that need to be crossed have poor crossing facilities with large junction radii
- there is a shared cycle and pedestrian footpath that provides further obstacles to pedestrians

Clifford's Tower

Due to its height and form, Clifford's Tower provides excellent visual orientation from a distance. However, access to Clifford's Tower is dominated by vehicular traffic and it is difficult to access it directly. There are two large car parks at the base of the Tower and access to these is provided by wide traffic lanes with sweeping large radii junctions to Tower Street, that cut across the pedestrian footpath access.

The pedestrian route to the Tower from Foss Islands Coach and Car Park is routed a long way round Skeldergate Bridge and a traffic roundabout with extensive guardrailing reinforcing the detours.

There is a long flight of steps to access the Tower and it was observed that many people with mobility impairments were undeterred by the number of steps but were having difficulty using the handrail. Handrail provision needed to be improved to assist people with mobility impairments.

3.4 Ring Road

A few main issues stand out in relation to access, mainly poor junctions and poor quality routes. These include crossings that provide poor quality experience for pedestrian such as

Crowded crossing Exhibtion Square

Blossom Street / Nunnery Lane / Queen Street junction

This is a busy four way junction with new style puffin single-stage crossings at each arm of the junction. The waiting time for pedestrians is long at around 90 seconds The Blossom Street arm has five-and-a-half lanes to cross in a single-stage and is daunting for mobility impaired people. The crossing time was adequate for a slow moving person, but is intimidating nevertheless due to the length of the crossing that requires resting in between. Consultees would prefer to reinstate the pedestrian refuge here that allows crossing in two stages.

Nunnery Lane Blossom Street crossing

Peasolme Green/ Layerthorpe junction

Peasolme Green is a complex junction that is dominated by vehicular traffic with poor pedestrian amenities. Pedestrian crossings are poor with four separate crossing stages and two staggered and guardrailed pedestrian islands to be negotiated to cross each single arm of the junction. Wayfinding and signage is poor.

Layerthorpe Peasolme Green crossing to city Walls

Tower Street/ Skeldergate Bridge junction

Extensively guardrailed junction, dominated by a roundabout and dual carriageway with few crossing opportunities and necessity to make large detours to reach key tourist destinations such as Clifford's Tower, the city centre and Fishergate Tower. Pedestrians are forced to run across the street to make a crossing where the guardrailing ends on the Bridge, on Tower Street and on Fishergate Street.

Tower Street Skeldergate Bridge junction

Bootham Bar/ Gillygate junction

This is a gateway into the city from Union Street coach park where many foreign and local tourists begin their journey.

The poor crossing facilities reinforced by guardrailing around the junction cause congestion and discomfort to pedestrians. They also disorient visitors as the crossings are not on the desire line. A natural entrance would be through Bootham Bar, but the pedestrian desire line through it has guardrailing across it, creating an unwelcoming entrance. As most visitors from the Union Street coach park are on the Bootham side of Gillygate, they cross Gillygate to Bootham Bar, walk along the guardrailed section of the Bar, and then are required to make a two stage staggered guardrailed crossing of St Leonards Place to get to the city Walls or the Minster via High Petergate. Some cross Gillygate for a more direct access to the heritage sites in one phase which causes congestion at the guardrailing at this section of the crossing.

Pedestrian environment is of poor quality in general due to

- poor walking links between significant historic sites linked by the Ring Road
- inadequate crossing opportunities of the Ring Road leading to jay-walking
- extensive guardrailing at junctions
- inadequate rest and seating opportunities
- poor quality side road junctions with wide junction splays
- cycle paths placed on the footpath

Other route issues include:

Lendall Bridge to Bootham Bar

- Narrow and crowded footpaths on St Leonards Place
- Bus stops further encroach on footpath space
- Junctions with wide radii narrow the footpath at crossings
- Footpaths not continuous at Exhibition Square

Bootham Bar pedestrian barrier

St Leonards Place bus stop

Bootham Bar to Monk Bar

- Gillygate: poor pedestrian environment with narrow footpaths, poor crossing opportunities and heavy pedestrian traffic from Union Street coach station.
- Lord Mayors Walk: poor crossing opportunities to city Walls and few rest places
- Monk Bar: no formal crossing provided at Monkgate either side of crossing and a staggered guardrailed crossing not on desire line provided at the Ring Road arm.

3.5 Signage and wayfinding

Signage in the city was generally considered to be poor with visitors often taking a long time to become orientated. In particular, mention was made by several participants of lack of wayfinding signage to public toilets especially the Silver Street toilets which are not effectively signed from St Sampson's Square or Parliament Street and are only signed on Silver Street by a tiny sign obscured by a hanging basket.

"It's about how anyone would know they [Silver Street Toilets] were there"

Bob, Silver Street

Finger post directing towards Silver St Toilets

Fingerpost heritage signs

People with visual impairments and those looking from a distance had trouble reading the fingerposts because of the low 'x' height of the font and the lack of tonal contrast between the gold text colour and the green of the background. The destinations on the finger posts were also not always the most relevant.

'It's a bit unclear, the letters are a bit little for me'

Caroline

There was also a lack of signage between sites of historic and tourist interest.

4 Way forward and recommendations

4.1 Footpath width and surfacing

The most significant source of problems for participants was the poor standard of paving found throughout the city centre and the steep and unpredictable crossfalls often found on the often narrow and overcrowded footways. Steps should be taken to identify and repair problematic areas of paving whilst ensuring that steep (and especially uneven) gradients are removed on any street receiving significant attention. Efforts should be made to remove unnecessary street furniture as well as deterring other footway obstructions through better enforcement of parking and the elimination of as many 'A' boards as possible.

Better control of the siting of temporary erections (such as cafe tables and market stalls) would also be useful so that their positioning works in harmony with other street elements to minimise the disruption they cause. This is particularly true on Parliament Street where any future design work should deal specifically with the positioning of these temporary erections.

4.2 Level surface pedestrian demarcation

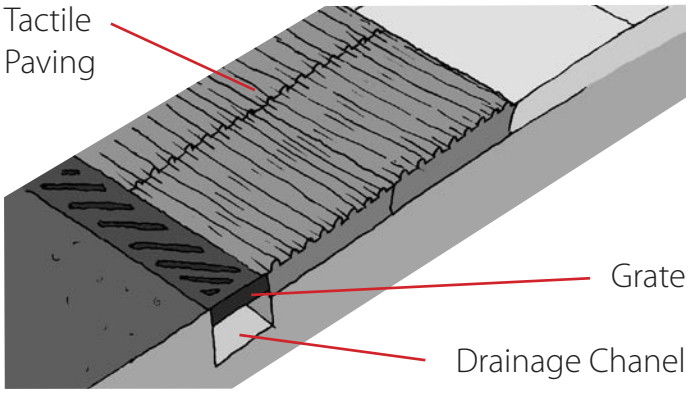
The level surface streets that exist in York seem to be popular with the majority of project participants including some with visual impairments. Their disruption to people with visual impairments is mitigated by the presence of the drainage gulley which acts as an effective delineation between footway and carriageway as well as a useful line for long cane users to follow. This drainage gulley however causes difficulties for people with mobility impairments or anyone unsteady on their feet.

The level surfaces that alternate with kerbs, such as on Davygate, are much more problematic because they are not delineated and are relatively unpredictable.

The lack of delineation on St Helen's Square is also problematic.

It is recommended that wherever there is a level surface a tactile delineation is provided. This would make navigation easier for people with visual impairments as well as removing some of the unpredictability for other street users. The most effective form of delineation would be tactile paving and for most people with sight loss the fact that tactile paving is used is much more important that which type is specified.

There are two options for the type of tactile paving to be specified. If consistency with nationally agreed guidance ['*Guidance on the use of tactile paving*', Department for Transport, 2005] is to be maintained the Blister tile found at uncontrolled crossings should be used in these situations.
If consistency is sought with current research ['Shared Space Delineators; Are They Detectable?', Childs et al, UCL Accessibility Research Group, 2010] and practice (at least in London) then the Corduroy hazard warning tile used at the tops and bottoms of stairs should be used with the bars orientated parallel to the direction of the street. Childs et al's results suggest that tactile paving should be installed to a depth of 800mm across the footway however it is likely that, for the participants in this study at least 400mm depth would suffice where 800mm would not be practical. It is recommended that tactile paving be installed as single 400mm tiles rather than in smaller sets. Whichever tactile tile is used in this situation efforts should be made to use it consistently wherever the surface is level but pedestrians do not have priority over vehicles.



The Department for Transport has committed itself to reviewing the guidance it publishes but it is unclear when this review will take place.
The optimum configuration for the streets that are currently level surfaces would be to replace the drainage gullies with channels set below the level of the footway and covered with metal grates to maintain a level surface. Tactile paving should be installed on the footway side of the grates as discussed above.

There are opportunities to improve the accessibility of some of the streets which currently have traditional kerbed arrangement by levelling them in this way, particularly those with extremely narrow footways.

4.3 Pedestrian routes and crossings

The movement of pedestrians outside the footstreets area is restricted by motor traffic dominated roads with poor pedestrian permeability. Efforts need to be made to improve pedestrian routes by providing permeability through footpath continuity, adequate and convenient crossing points and good wayfinding. Above all routes need to be intuitive and direct, following visual clues and orientation provided by significant historic sites that are a special feature of York.

Well-designed crossings are of vital importance to the ability of pedestrians to move around easily and safely. Crossings across streets of different character need to be treated in different ways.

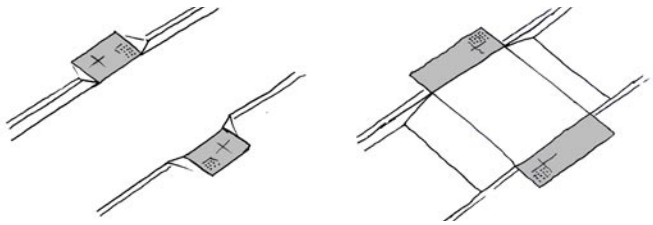
While it is easy for pedestrians to cross the footstreets due to the low volume and speed of traffic, crossings of through traffic roads and the Ring Road can be problematic.

Informal crossings

Consideration should be given to reducing speed and volume of traffic particularly within the city centre, to allow easier informal crossing.

Informal crossing points can be provided in two ways and are of significant benefit to people using wheeled mobility aids.

Traditional dropped kerbs have the advantage of being easier to navigate for people with visual impairments however can be harder for people using wheeled mobility aids, especially where geometric constraints necessitate a steeper than desirable slope.



Traditional dropped kerb and traffic table

Traffic tables, where the level of the footway is brought up to the level of the carriageway are easier for people with wheeled mobility aids to navigate however can present problems for people with visual impairments because they can often constitute an undemarcated level surface. It is recommended that where 'traffic tables' are installed tactile paving is provided as a demarcation along the full length of the level section.

Formal crossings

Where formal crossings are provided zebra crossings offer the greatest opportunity for pedestrians to assert priority over vehicles however older people and people with visual impairments, including many surveyed here, often express a preference for signalised crossings as they provide greater certainty of safety when crossing.

Zebra crossings and can be located closer to junctions han their signalised counterparts so may be more likely to be positioned near or at desire lines.

Zebra crossings could be considered at Bootham Bar crossing of Gillygate and Bootham and crossing of St Leonard's Place to the city Walls at Exhibition Square, reflecting the volume of pedestrians and the priority that should be accorded to them.

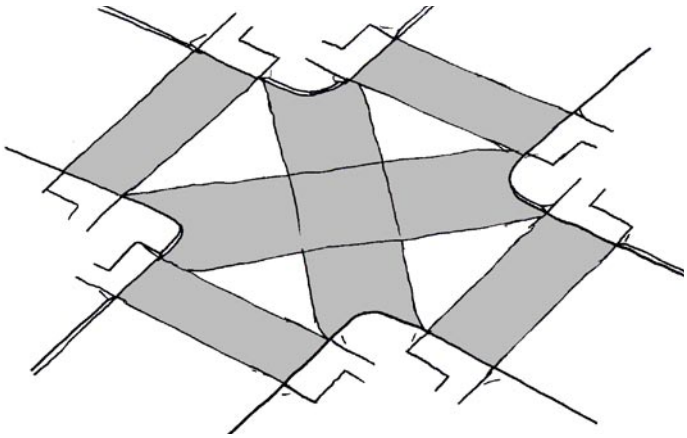
Signalised crossings should be maintained at particularly traffic heavy junctions such as Blossom Street / Nunnery Lane and Pavement / Piccadilly / Parliament Street.

Major signalled crossings

In the city centre major crossings should be tightened to reduce pedestrian crossing distances with smaller junction radii, wider footpaths and crossings closer to the mouths of the junctions on desire lines.

Manual for Streets (MfS) recommends that junctions should include convenient and direct crossing facilities for pedestrians desirably across all arms of the junction. This should be considered at junctions such as at Monk Bar where there are no signalled crossings provided on the Monkgate sides of the crossing in both directions.

Diagonal crossingscan be useful at traffic signal crossings as enable to pedestrians to cross to the opposite arm of a junction in one movement instead of two which is quicker and more convenient. Diagonal crossings should be considered at all signalled crossings where there is a heavy flow of pedestrians including the route from the station to the city centre and along Museum Street to Gillygate and Bootham Bar and the Pavement/ Piccadilly/ Parliament Street junction.



Diagonal crossing

Pedestrian refuges/ traffic islands

These can be useful where there is a long multi-lane crossing such as the Blossom Street/ Micklegate crossing where the lack of a pedestrian refuge creates no resting opportunity and a perception of danger for people with mobility and visual impairments. However, they should not be necessary for shorter crossings where they add delays to pedestrian crossing time and prioritise movement of vehicular traffic.

Straight ahead two stage crossings are more convenient for pedestrians than staggered crossings which involve delay and deviation from the desire line and are often ignored for this reason placing pedestrians in danger. It is recommended that staggered junction crossings are progressively replaced with straight ahead crossings starting with ones in busy pedestrian heavy areas. The preference should be for crossings to be in a single phase except at long multi-lane junctions.

Guardrailing

Guardrailing used to reinforce formal crossing points and to deter informal crossing restricts pedestrian movement, restricts footpath width and requires deviation from desire lines for crossings. They also allow motor traffic to travel more quickly and increase danger where guardrailing ends as this is where pedestrians then choose to cross. for example signs on Foss Island Road advising pedestrians not to cross at the end of guardrailing are located at a busy informal crossing point where the signs are ignored. It is recommended that a review of guardrailing is carried out and this is only retained where obstructed sightlines may require their presence. They should not be used in areas of high pedestrian traffic where the speed and volume of motor traffic should be reduced instead of restricting pedestrian movement.

Side road crossings

It is recommended that pedestrian desire lines should be kept as straight as possible at side-road junctions as advised in Manual for Streets. Small corner radii minimise the need for pedestrians to deviate from their desire line and also help reduce the speed of turning traffic. Manual for Streets also advises raising the carriageway to footway level across the mouths of side roads to allow people to cross on one level.

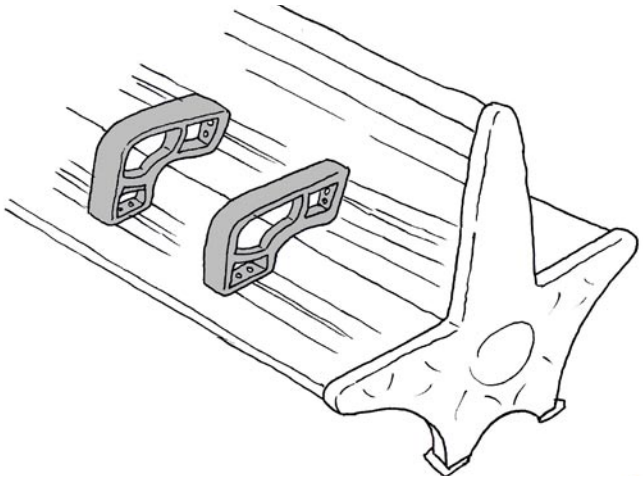
Where the carriageway is raised in this way the level area should be treated in the same way as the traffic table discussed opposite with tactile paving provided along the full length of the level area.

4.4 Street furniture

Seating

The most significant challenge relating to street furniture is the provision of sufficient seating, and distributing it so that those who tire easily can access all areas of the city centre. Currently it is possible to walk many hundreds of metres down some streets without encountering an opportunity to sit down.

The seating itself could be significantly easier to use for older and disabled people, particularly if it was slightly higher and had seating spots with armrests on each side to make standing up easier. There is an opportunity to retrofit cast iron arm rests to existing seating by screwing through into the slats. Such armrests would need to be drawn up to suit the existing seating and procured from a foundry or street furniture manufacturer.
If seating is to be replaced it is recommended that seats are purchased that have a seat height between 450mm and 500mm and have an armrest on either side of each seating space.



Bolt-on cast iron arm rests

Best practice recommends having one end of the seat without an arm rest to allow wheelchair users to transfer and a seat profile that does not significantly overhang its base to prevent collision with long cane users, however evidence of these requirements was not gathered from participants in this study.

Bollards

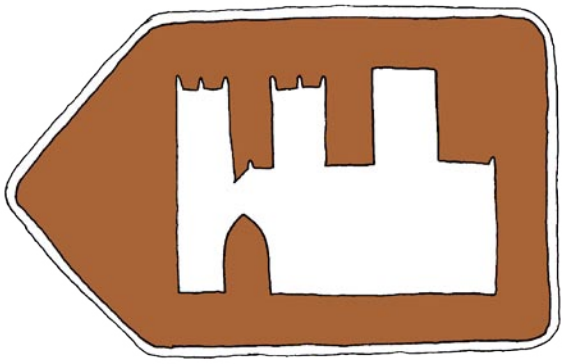
Some participants cited the presence of bollards on the footway as a problem. However, for others they presented a reassuring barrier to vehicles and something to grab if they felt unsteady. The most problematic bollards were those positioned on very narrow footways (such as on Market Street). The height of the low York bollards was not mentioned as an issue by any participant. Guidance recommends that bollards should be at least 1.0m high.

4.5 Way finding and signage

The two biggest challenges regarding wayfinding are improving the navigation from the station to the city centre and across the discontinuities along the walls. Signage to key amenities such as public toilets is also a major issue for some visitors.

Because of the legibility issues discussed earlier as well as the lack of space on the footways additional fingerposts are probably not the best way to sign this route. The key piece of information most visitors arriving at the station or the coach parks want is the direction to walk to get to the Minster. Once at the Minster navigation for most visitors becomes much easier.

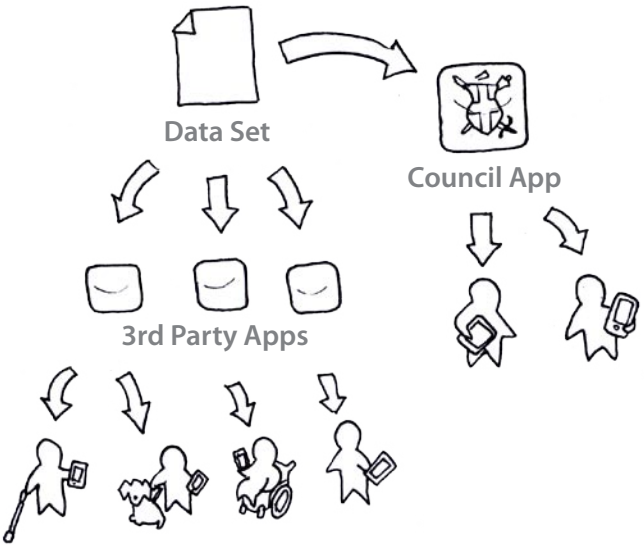
The route to the Minster could be marked by small arrow signs mounted on lamp posts and walls. If these signs featured an iconic depiction of the minster they could be smaller and would also be more accessible to visitors who did not read English.



Minster icon sign

Another tactic could be to create a coloured line on the ground running from inside the station to the point where the Minster comes into view. Both of these tactics could also be adopted for the routes between the discontinuities in the walls.

Amongst the people who could read them the finger posts were popular suggesting that if investment were made in improving wayfinding across the city fingerposts may still be appropriate. Improvements could be made to the existing finger posts by painting them in more contrasting colours (such as black and white). New fingers could also be produced with a more legible font (higher 'x' height) and more contrast and fitted to the existing posts.



Inclusive data provision

There are increasing opportunities for local authorities to provide high quality and useful wayfinding information through digital channels. This information can be highly inclusive as different devices held by different people can interpret it in different ways. A high quality database with the GPS locations of buildings, amenities and street elements such as crossings and bus stops could be published to open data standards and maintained by the council (possibly in several languages). This would allow third parties to create powerful smart phone applications which would be useful to many users of the city centre, particularly visitors and people with visual impairments who use smart phones.

The council could also produce a suite of applications, or a web application, that use this data and could be accessed by scanning a QR code with a smart phone. The QR code could be reproduced anywhere, most usefully on a sign in the station, in the tourist information centres and on the fingerposts themselves.

Another datas set could also be published featuring interpretation information for various sites and locations including at numerous points along the walls, in streets and at points of interest. Again a suite of applications could be produced to relay this information to visitors through their devices, whilst publishing the dataset to open data standards would allow third parties to right applications which could improve on the council's offering or be more tailored to the needs of specific groups.

4.6 Promoting Shopmobility

York currently has an independently funded Shopmobility scheme that hires out electric scooters, wheelchairs and manual wheelchairs. This is located outside the city centre on the second floor of Piccadilly Multi-storey Car Park, with restricted opening hours from 10am to 4pm Monday to Saturday.

The scheme is not well publicised and is in an out of the way location not accessible to those coming in to York by train, bus or coach.

Shobmobility needs to be better promoted and publicised in the short term.

In the longer term York Council should consider more suitably located premises for this service including Shopmobility branches at the train, bus and coach stations and at the major car parks.

This report was commissioned by the city of York, researched and written by Brenda Puech and Ross Atkin and designed and illustrated by Ross Atkin.

Many thanks to all of the people who so generously and helpfully participated in the research.