# BUS STATION SUBGROUP

# *RESPONSE TO CITY OF YORK COUNCIL'S ANALYSIS OF YBF BUS INTERCHANGE PROPOSALS*

## *Contents*

# *Summary*

Conclusions listed here are numbered in the same order they appear in the more detailed sections below, highlighted in dark red.

## *General*

1 The 'Upper South Concourse' bridge in the YBF proposal is not expected to form part of any immediate Station Front scheme, but provision for a practical and affordable crossing of some sort should be made.

2 All aspects of both sides of the station should be considered together.

3 There are valid objections to the YBF bus station proposal, but the CYC proposals fall short too, and we believe there is a need to continue looking for better alternatives.

4 YBF are concerned that CYC apparently have no interest in further discussion about bus interchange facilities at the station.

5 YBF accepts the need to explore alternatives to the use of angled bays, as first proposed. An alternative proposal with straight-through stops is included in this document.

6 South of the Portico, roughly where CYC propose, is an appropriate location for the bus hub, but only if access to the station is sheltered and more direct than via the Portico.

7 Better turn round facilities than provided by the CYC's proposals are needed.

## *CYC Assertions Challenged*

8 YBF challenges CYC's assumptions about how large the future increase in bus use is likely to be, and what should be catered for in the plans.

9 YBF challenges the apparently over-optimistic assertions made about the capacity increase provided by the Station Front proposals as they stand.

10 YBF challenges the apparently over-pessimistic assertions made about the capacity provided by the alternative YBF scheme.

11 YBF challenges the CYC claim that their proposal involves no loss of amenity for bus users.

12 YBF proposals do meet other design objectives, provided the magnificent but otherwise unnecessary pedestrian crossing directly across from the Portico is dropped.

13 YBF have no desire to propose anything that does not accommodate current use except where there is a case for it, and we see nothing in our proposals that does so.

14 YBF reject the assertion that our proposal leaves passengers more vulnerable to terrorist attack.

15 YBF are dismayed by the difficulty in funding an improved bus interchange at the railway station.

16 The YBF proposals do not reduce pedestrianised areas to an unacceptable extent.

17 The criticism of the YBF proposal on the grounds of tarmac area is weak; an interchange with adequate capacity cannot be achieved with a small road area.

## *Proposals Compared*

18 The current CYC Station Front proposals are based on unambitious and insufficiently forward-looking objective criteria.

19 CYC's preferred location for the Taxi Rank waiting queue creates a barrier to direct access to the station, forcing people to take an otherwise entirely unnecessary detour.

20 The CYC Station Front proposals do too little to make the railway station an easy and natural turning point for terminating services.

21 YBF's detailed comparisons between present arrangements demonstrate a superiority of YBF's proposals over CYC's, which is very difficult to reconcile with CYC's conclusions.

# Background

## History

York Bus Forum were concerned that CYC's 'York Central' Consultation proposals made inadequate provision for buses.

Independently at the time, Alan Robinson came up with a proposal for a bus station at the railway station and submitted it in a response to the consultation. When YBF took an interest in it, he became a YBF member and joined the bus station working group YBF had already set up.

Later, the CYC Station Front Consultation was launched, and YBF's doubts about the adequacy of bus provision were confirmed: buses were given too low a priority, and the need for long-term capacity increases seemed not to have been addressed.

The bus station proposal evolved to include a taxi rank and a bridge crossing the railway at the south end of the station, and was incorporated into responses to this later consultation.

In addition to the documents describing it, the idea was presented on 18 September 2018 at a YBF open meeting at West Offices, which was generally well received.

A motion was passed asking CYC to study the proposal. They responded in October with document 5 in the list below, containing a comparative analysis of the CYC and YBF schemes. This paper is YBF's response to that.

## Related Documents

This document is part of a continuing conversation regarding developments around York Railway Station, which has included the following documents and proposals:

1. CYC and other documents relating to “York Central”, on the west side of the station.
2. CYC’s Station Front consultation *Illustrative Masterplan*.

   www.tinyurl.com/YorkBusCYC1
3. YBF’s response to (2), advocating better provision for buses (‘YBF1’).

   www.tinyurl.com/YorkbusYBF1
4. A public meeting held on 18 September to discuss (3).
5. CYC’s response to (3) and (4), *2018-10-11 CYC - York Bus Forum response to motion.pdf* rejecting most of YBF’s proposals.

   www.tinyurl.com/YorkbusCYCresponse
6. Announcement of Council Executive meeting to approve planning application and detailed design.

   www.tinyurl.com/YorkbusCYC2
7. This document (‘YBF2’).

   www.tinyurl.com/YorkbusYBF2

## *YBF Bridge Proposal*

The YBF proposal included an 'Upper South Concourse' bridge at the south end of the station. The CYC response quite rightly pointed out that this could only be a long-term possibility falling outside the scope of the immediate Station Front scheme.

This is entirely in line with our thinking. Provided the the design of the present scheme does not close off options for a future crossing of some sort here, detailed consideration of this can be deferred.

The CYC response did mention the alternative possibility of an underpass instead of a bridge. This has obvious advantages but it must be borne in mind that tunnelling under operational railway stations – and the number of tracks is quite large – is usually disruptive and therefore expensive.

The remainder of this paper will ignore this aspect of our proposals and address more immediate questions.

**1. The 'Upper South Concourse' bridge in the YBF proposal is not expected to form part of immediate Station Front development, but provision for a practical and affordable crossing of some sort should be made.**

## *Present Position*

We all agree that these developments around the station are massively important, and will affect York for decades and even centuries to come. Today's 1877 station still has impact, and decisions taken today will still be relevant 150 years from now. ***It is important to get this right***.

**2. All aspects of both sides of the station should be considered together.**

We very much welcome the time and trouble that CYC officers have taken in engaging in the above conversation. We particularly appreciate the care they have taken in preparing (5), to which this document is our response.

We accept that the YBF proposal could be improved upon, and hope that continued dialogue can arrive at something better than either CYC or YBF have proposed so far.

**3. There are valid objections to the YBF bus station proposal, but the CYC proposals fall short too, and we believe there is a need to continue looking for better alternatives.**

## *YBF Input into Further Schemes*

The CYC response concludes by saying CYC looks forward to YBF's input into further schemes, worded in a way that suggests further input into this particular scheme is not expected. We find this disconcerting.

**4. YBF are concerned that CYC apparently have no interest in further discussion about bus interchange facilities at the station.**

# *Introduction*

This document is primarily a response to the CYC document (5) above, which rejected YBF's interchange proposals made in YBF1. We appreciate the comments made by CYC, and the time and trouble they have taken in responding to our ideas. However, we feel their proposals are severely flawed, and the analysis partial.

While our proposals can certainly be improved, we feel that in many respects they are better than CYC's. Our comparison of the schemes in the *Proposals Compared* section on page 10 below shows that on an admittedly very simplistic basis, our proposals score more highly than the CYC ones from a bus user's point of view.

### *Delay*

CYC's prime argument against YBF1 was that it would lead to delay, as buses would have to reverse out of the proposed angled bays, which bus operators would not accept. We reject CYC's quantitative estimates of the extent of the delay contained in document (5) above, but we accept that bus delay is a disadvantage. See the *Capacity Increase Provided by YBF Proposal* subsection on page 8 below for more details.

### *Straight-through Stops*

CYC were insistent in wanting faster "straight-through" bus stops preferred by bus operators, but this is not penalty-free. It has notable disadvantages for southbound bus passengers using the railway station, as discussed under *Straight Through vs. Angled Bays* on page 11 below.

**5. YBF accepts the need to explore alternatives to the use of angled bays, as first proposed. An alternative proposal with straight-through stops is included in this document.**

### *Location*

YBF are satisfied that the bus interchange location chosen by CYC is the right one, but we are not happy with the proposals for access to the station from here. Our own proposals provide more direct access with shorter walking distances and better shelter.

This is discussed further in under the *Location* heading on page 10 below.

**6. South of the Portico, roughly where CYC propose, is an appropriate location for the bus hub, but only if access to the station is sheltered and more direct than via the Portico.**

### *Turn Round Facilities*

Bringing all Park & Ride and terminating services to the station requires improved turn round facilities. CYC's proposals do make some improvement, but YBF proposals are superior in this respect. See *Comparison Table* on page 12 and *Turn Round Facilities* on page 14 below.

**7. Better turn round facilities than provided by the CYC's proposals are needed.**

# *CYC Assertions Challenged*

We accept some of the CYC criticisms of the YBF proposals, but not all of them.

CYC's response to the first YBF proposal includes a capacity comparison based on ability to handle services anticipated to serve Local Plan growth. This deserves challenge on a number of counts.

## *Capacity Increase Required*

The CYC response claims it would be reasonable to plan for 120 buses per hour at the station front, which does represent a real increase over the present number – also 120 – because some services would be re-routed to the west side of the station. But services going to the west side would be well under half of the total, so the increase, however real, is not very great.

An allowance for an increase this small is claimed to be enough because there is sufficient capacity to handle Local Plan growth. There are however reasons to believe growth in bus services need to be greater than this:-

a) The number of passengers using buses will not simply increase in proportion to the number of travellers. York's roads do not have the capacity to take an increase in private car traffic, so use of buses must increase in greater proportion.

b) This discussion is specifically about the railway station, where according to the Station Front *Illustrative Masterplan*, the number of railway passengers will *triple* over the next 30 years. This will generate passenger flows over and above local growth, and for similar reasons buses must take a disproportionate share of this extra traffic.

c) It would be very desirable to bring more services – in particular Park & Ride – to the station. This also involves a need for capacity increase over and above that due to local growth.

d) Increased pedestrianisation of the city centre is likely. This will generate additional pressure to abandon the private car and use buses.

e) Some form of congestion charging scheme may in the future become unavoidable, however unpopular it would initially be. This would displace more journeys onto buses.

f) In any case, modal shift from private cars to buses is to be strongly encouraged, to address our chronic congestion and air quality problems.

Given all the above, a defence of the CYC Station Front proposal on the grounds that it will provide sufficient capacity to cope with increased demand due to local growth alone looks highly dubious.

**8. YBF challenges CYC's assumptions about how large the future increase in bus use is likely to be, and what should be allowed for in the plans.**

## *Capacity Increase Delivered by CYC Proposal*

Assertions CYC's analysis makes about the capacity increase provided by their proposal look questionable. According to figures in that document there are currently a total of 120 buses per hour serving the station. The Station Front proposals are claimed to be able to handle up to 212 buses per hour with hardly any more stops than there are at present.

We know from experience that at peak times buses fail to run on time, that delays and bunches occur, and that there are times when it is clear more stops would help, even now. We doubt whether a 77% increase in the number of buses per hour can be achieved without unacceptable congestion.

We challenge the figures deployed in defence of the CYC scheme and would like to know how the calculations were done. Is this a case of theoretical calculations based on idealised assumptions, which are in practice unrealistic?

**9. YBF challenges the apparently over-optimistic assertions made about the capacity increase provided by the Station Front proposals as they stand.**

## *Capacity Increase Provided by YBF Proposal*

In defence of the CYC scheme, the CYC analysis assumes it can deliver a capacity of 20 buses per hour per stop, i.e. on average one every two minutes, whereas the YBF scheme can only deliver 8 buses per hour per stop, or one every seven and a half minutes.

While it is true that reversing out of bays adds to effective dwell time, it is not plausible that this extra delay amounts to over five minutes per bus. It appears the analysis is not only unduly optimistic about what the CYC scheme can deliver, but is unduly pessimistic about what the YBF scheme can deliver.

Furthermore, the CYC analysis assumes services such as City Zap might want a bay to themselves even though they do not run as many as eight buses per hour. But the same analysis applies no such assumption to their own scheme. This looks like another attempt to bias the analysis towards CYC's own scheme.

While we accept there are valid reasons not to pursue the original YBF proposal, this apparent bias in the analysis towards the CYC scheme is a matter for concern, because it looks as if CYC are acting defensively and are unwilling to look at alternatives in a fair and balanced way.

**10. YBF challenges the apparently over-pessimistic assertions made about the capacity provided by the alternative YBF scheme.**

## *Equivalent Passenger Amenity*

The CYC analysis asserts that the CYC design is broadly comparable to the present accommodation, so there is no loss of amenity. We disagree. By placing the bus interchange further south, passengers are forced to walk a considerably longer distance from the Portico to the buses, and not under shelter.

We are however pleased to see that CYC recognise the superiority of the YBF1 proposal in this respect.

**11. YBF challenges the CYC claim that their proposal involves no loss of amenity for bus users.**

## *Congestion and Vehicles in the Portico*

The CYC analysis asserts that the YBF scheme does not address the questions of Tea Room Square congestion, short-stay car parking, set down, and pick up. Actually it does, but these were referred to only in document text, not in the sketch map presented at the West Offices meeting, so this may have been missed.

YBF have given considerable attention to the question of car parking, both long-stay and short-stay, and ways to alleviate traffic congestion by reducing the need for it (e.g. Park & Ride as an alternative) and relocating it more imaginatively (e.g. use of Marygate car park for some station parking).

The CYC analysis is unclear about vehicles and the Portico. The YBF proposals do remove vehicles from inside the Portico, and we are in complete agreement with that aspect of CYC's plans, but we propose to locate the pickup and dropoff outside the Portico. We challenge the need to completely remove vehicles from outside the Portico,

and question the value in creating a pedestrian crossing directly across from the Portico, when there is no merit in it other than aesthetic.

**12. YBF proposals do meet other design objectives, provided the magnificent but otherwise unnecessary pedestrian crossing directly across from the Portico is dropped.**

## *Accommodation of Current Use*

The CYC analysis claims the YBF proposal does not meet this criterion, but the reasoning is based on things that are claimed to be 'not clear', despite text (not the sketch map alone) addressing the relevant issues to an adequate extent. “Taxi facilities provided adjacent to bus station'” is an accurate observation but not in itself a valid objection. “Possible impacts on pedestrian areas/ tea Room Square/ Portico/Station Square” suggests the YBF proposals have not been studied sufficiently thoroughly.

**13. YBF have no desire to propose anything that does not accommodate current use except where there is a case for it, and we see nothing in our proposals that fails to.**

## *Safety by Design*

Under this heading, the claim is made that the CYC proposals are safe due to the design of kerb lines. Since terrorist drivers are unlikely to be too timid to mount pavements, and the YBF proposals put the bus concourse inside the train shed, where vehicles cannot enter, this claim is difficult to accept.

Rather the reverse, in fact: YBF believe our proposal is superior in this respect and the CYC analysis is wrong.

**14. YBF reject the assertion that our proposal leaves passengers more vulnerable to terrorist attack.**

## *Affordability and Deliverability*

We largely agree with CYC's conclusions under this heading.

CYC observe that bus operators have not committed to paying for an improved interchange. But the city needs one. Failure to find a way to fund it represents a failure of national policy, which CYC cannot be blamed for, but a way round it does cry out to be found.

**15. YBF are dismayed by the difficulty in funding an improved bus interchange at the railway station.**

## *Reduction of Pedestrian Circulation*

In the concluding section the CYC analysis says the YBF proposal would reduce the space available for pedestrian circulation.

This claim is challenged in two respects:-

a) The space made available by the CYC Station Front proposals is vastly more than exists at present and more than necessary for free circulation. A reduction on this is acceptable provided it is not excessive; and

b) The proposed concourse inside the train shed is an additional and large pedestrian space available to all, not just bus passengers. Its presence reduces the need for external pedestrian space.

**16. The YBF proposals do not reduce pedestrianised areas to an unacceptable extent.**

### *Number of Lanes and Tarmac Area*

CYC criticise the large area of unsightly tarmac in the YBF proposal.

It is difficult to see how an interchange with adequate capacity, whether straight-through or with angled bays, can be achieved with no more tarmac than CYC propose. It is also difficult to see how tarmac area considerations should take precedence over the provision of an interchange with greater capacity than CYC propose.

Further, it would be possible – but at extra cost of course – to mitigate the unsightliness by the use of paving.

Our second proposal has a similar number of lanes to the CYC proposal, which are similarly broken up into different roads, so the objection of a single large expanse is removed.

**17. The criticism of the YBF proposal on the grounds of tarmac area is weak; an interchange with adequate capacity cannot be achieved with a small road area.**

## *Proposals Compared*

### *Objectives*

While the CYC response provides a useful comparison between the schemes, it assumes solutions must meet a set of objectives we feel need to be challenged.

The brief given to the consultants appears to have been essentially to provide the same facilities that already exist, but in new locations. As observed above, we think the capacity of the CYC proposals is inadequate. The proposals appear not to take the opportunity for service improvements or future demand increases into account.

Also, CYC have apparently not seen an opportunity to expand the bus interchange in order to bring more buses to the station.

**18. The current CYC Station Front proposals are based on unambitious and insufficiently forward-looking objective criteria.**

### *Location*

Effective interchange between bus and rail requires a bus hub close to the railway station. But which part of it? Since 1877 the 'centre of gravity' of the station has moved southwards due to platform extensions, and the south-end platforms are more intensively used. So while the Portico is in the middle of the original ground plan, it is now in practice north of the (ill-defined) working centre of the station.

Putting the bus hub south of the Portico is therefore an appropriate solution, provided the walking route between the buses and trains is sheltered and sufficiently direct. The first YBF proposal achieved this very effectively by removing infill from the arches in the train shed wall.

If interchange capacity is to be increased without spreading the stops over too large an area, there is no apparent practical alternative to putting it here. So YBF and CYC are agreed on the general location of the bus interchange. Our differences concern its size and nature.

If passengers have to walk from a bus south of the Portico to the Portico, then from there to a location south of the main footbridge inside the station, walking distance is not only unnecessarily long, but longer than at present. Furthermore, in poor weather it is preferable to be able to walk under cover. In these respects the CYC proposals fail to avoid loss of amenity for bus users boarding and alighting at the station.

A weakness in the CYC proposals is the location of the taxi rank, queue, and drop-off lane. These put a barrier between the bus stops and the station, making it impossible to integrate the bus interchange with the station as well as the YBF proposals do.

## *Straight Through vs. Angled Bays*

The YBF proposal achieved excellent integration of bus and railway stations through the use of angled bays, but these, unfortunately, are the primary source of objections to the scheme.

CYC wanted faster straight-through bus stops preferred by bus operators, but this aspect of the CYC proposals has considerable disadvantages for southbound bus passengers using the railway station:-

1. They must cross a major road with luggage, and walk 100 yards or more between station and bus stop. Under YBF1, no road crossing is necessary, and the walking distance is far shorter.
2. They are exposed to poor weather and vehicular terrorist attack.

Many passengers already suffer these disadvantages, but more will do so over coming decades as bus and rail use – which is projected to *triple* over thirty years – Increases. If southbound passengers must live with these problems then so be it, but our alternative does attempt to mitigate them to some extent.

No best-of-both-worlds solution has emerged. All this boils down to a conflict between the interests of southbound passengers changing at the station and southbound passengers not changing at the station. YBF2 speeds up journeys for those not changing at the station by increasing walking distance for those who do.

There is however no need to inflict longer walking distances upon northbound passengers in the way that the CYC proposals do. The same applies to those travelling in terminating buses (whether northbound or southbound). For these two classes of passenger, who are more than half of the total number, our revised proposals retain many of the advantages in our original YBF1 proposal. Direct access to the station is retained for these users by putting straight-through stops alongside the train shed wall, and opening up arches as in YBF1.

Many travellers using local buses to go to the station would have the benefit of excellent access on one of their outward and return journeys, but not both. The present arrangements are similarly better for northbound bus users. Users of terminating and turning-round services would have the full benefit in both directions.

We have not explored the possibility of a mixture of straight-through local and angled terminating bays.

## *Taxi Rank Location*

Putting the northbound bus stops alongside the train shed wall displaces the taxi waiting queue. Taxi users too would benefit from direct access through the arches, but there is no need to put the queue alongside the train shed wall.

CYC propose devoting the train shed wall to the taxi rank and queue, rather than opening up the arches and improving station access. This wastes an opportunity to do something much better.

**19. CYC's preferred location for the Taxi Rank waiting queue creates a barrier to direct access to the station, forcing people to take an otherwise entirely unnecessary detour.**

## *Services Terminating in York*

Numerous bus services turn round in York. Many of these – particularly those coming from the east side of the Ouse – do not at present serve the railway station. We believe they should, but of course that increases bus traffic at the station, requiring more stops. The CYC proposals appear not to take account of this.

The list of routes not serving the station includes Park & Ride services, even though from a congestion point of view P&R is preferable to the use of private cars and long-stay parking at the station. To maximise use of this better alternative, P&R services would need to operate for longer hours, but that consideration does not significantly affect the design of the bus interchange, so needn't be elaborated upon here.

**20. The CYC Station Front proposals do too little to make the railway station an easy and natural turning point for terminating services.**

## *Comparison Table*

CYC raised several issues in their comparison. We have extended their criteria and the table below compares the situation today with the three main proposals for change, namely:-

| | |
|---|---|
| **Now** | Present arrangements |
| **CYCSF** | CYC Station Front consultation proposals |
| **YBF1** | First YBF interchange proposal with buses reversing out of angled bays |
| **YBF2** | Second YBF interchange proposal with straight-through stops |

The comparison assumes the proposal for an additional pedestrian/cycle crossing over the railway does not yet exist.

Where cells are split into two, N refers to northbound buses, which stop on the station side of Station Road, and S to southbound ones stopping on the Bar Walls side..

In the YBF2 proposal, turning buses to and from the north are assumed to turn round on the way in, and turning buses to and from the south are assumed to turn round on the way out, so all turning buses use the northbound stops, which there are more of. In the YBF2 column the Northbound category therefore includes more than half of all buses.

| Consideration | Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|---|
| Capacity / number of stops | Very poor | Poor | Good | Good |
| Turn round facilities | None | Limited | Good | Good |
| Integration with railway station | N: Good | N: Poor | Very good | N: Very good |
| | S: Poor | S: Very poor | | S: Adequate |
| Dwell time | Very Good | Very Good | N: Poor | N: Good |
| | | | S: Very poor | S: Very good |
| Buses crossing Station Road traffic | None | None | N: None | N, S: None, Turning: once |
| | | | S: All, twice | |
| Finding the right stop | Very Poor | Poor | Very good | N: Very good |
| | | | | S: Adequate |
| Advance ticket purchase | None | Unknown | Very good | N: Very good |
| | | | | S: Good |
| Shelter | N: Good | N: Poor | Very good | N: Very good |
| | S: Poor | S: Very Poor | | S: See text |
| Tarmac area | Very Poor | Good | Poor | Less |
| Terrorist vehicle attack | Poor | Poor | Good | N: Good |
| | | | | S: Poor |
| Dementia & Disabled | Poor | Poor | Very good | N: Good |
| | | | | S: Poor |

## *Figures of Merit*

A very simplistic way to arrive at overall figures of merit is on a simple points system, in which each scheme is given 1 to 5 points under each consideration heading:-

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | Very poor | **2** | Poor | **3** | Adequate | **4** | Good | **5** | Very good |

The values 1 to 5 are really meant to rank the schemes, and no attempt has been made to apply weighting factors, so the methodology is to say the least crude, but the conclusion does have some value.

| | Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|---|
| **N** | **27** points | **32** points | **46** points | **47** points |
| **S** | **23** points | **30** points | **41** points | **37** points |

For northbound passengers, YBF1 and YBF2 are virtually equivalent; both are substantially better than CYC1 which is better than the system today.

For southbound passengers, YBF1 is rather better than YBF2, which is better than CYC1. The present arrangements are very poor indeed.

An obvious weakness in the argument leading to this conclusion is the lack of weighting, so the impact of YBF1's two most serious weaknesses may not have been accounted for sufficiently. It is nevertheless very difficult to reconcile these conclusions about the relative merits of the schemes with CYC's conclusion.

**21. YBF's detailed comparisons between present arrangements demonstrate a superiority of YBF's proposals over CYC's, which is very difficult to reconcile with CYC's conclusions.**

## *Discussion of Table Entries*

We now turn to consider in more detail the criteria outlined in the above table.

### *Capacity / Number of Stops*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| Very poor | Poor | Good | Good |

The present arrangements have no room for expansion to meet future requirements. CYCSF does little to rectify this. Both YBF proposals attempt to do so.

CYC's response to the first YBF proposal disagrees with this, claiming the number of stops provided in the Station Front proposal is adequate. According to figures in that document, leaving out the sightseeing tours, there are currently a total of 120 buses per hour serving the station. The Station Front proposal is claimed to be able to handle up to 212 buses per hour with hardly any more stops than there are at present.

We know from experience that more stops would help, even now. We question whether a 77% increase in the number of buses per hour can be achieved without unacceptable congestion at times.

The CYC response claims it would be reasonable to plan for 120 buses per hour at the Station Front, this actually representing a real increase because some services would be re-routed to the west side of the station. But the number of buses serving the station's new west entrance would be comparatively small, so we do not believe this is enough.

We are also concerned that the Station Front proposals take no account of the desirability of a proactive increase in the number of routes serving the station, in particular Park & Ride services.

### *Turn Round Facilities*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| None | Limited | Good | Good |

We believe the infrastructure should permit all P&R and terminating services (e.g. Easingwold and Selby) to serve the railway station. At present they do not because the existing arrangements have no turn round facilities at all. This needs to be rectified.

CYCSF makes an improvement, but we believe not far enough. The YBF proposals do not involve the long convoluted turnaround provided by CYCSF except for empty buses going to and from layover parking in part of what is now the long-stay car park.

### *Integration with Railway Station*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| N: Good | N: Poor | Very good | N: Very good |
| S: Poor | S: Very poor | | S: Adequate |

CYCSF is less well integrated with the railway station than the present arrangements, though some improvement for northbound passengers could be achieved fairly easily by not making them walk via the Portico. But placing the taxi rank and drop-off between the buses and the train shed wall makes it impossible to achieve the degree of integration provided by YBF1 and YBF2.

YBF1, by having all buses stop against the train shed wall, and all passengers enter the station directly from there, is unbeatable in this respect. YBF2 retains some of this amenity for northbound and terminating bus passengers, but its straight-through design means some northbound buses stop on the island, and southbound passengers must cross Station Road somehow. The proposed underpass is an attempt to mitigate this to some extent.

### *Dwell Time*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| Good | Good | N: Poor | Good |
| | | S: Very poor | |

Passengers not boarding or alighting at the station are concerned primarily by delay. Bus operators too are concerned about this because minimum delay maximises asset use. In this respect YBF1 was poor, partly because buses reverse out of the stops, and partly because southbound buses have to turn into the station and then turn again on the way out. This would add significant delay, partly because it involves crossing northbound traffic on both turns.

The extra delay is undoubtedly one of the weakest points in the YBF1 scheme.

### *Buses Crossing Station Road Traffic*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| None | None | N: None | N, S: None, Turning: once |
| | | S: All, twice | |

YBF1 had a serious weakness in that all southbound buses had to turn on the way into the interchange, crossing northbound traffic, and turn yet again on the way out, again crossing northbound traffic. This adds to the effective dwell time, as well as increasing the potential for congestion.

YBF2 improves on this greatly, by only having terminating and turning buses cross traffic. Buses from and to the north turn on the way in to the northbound stops, and buses from and to the south turn on their way out of the northbound stops. Because these buses are in the minority and only cross traffic once, YBF2 is a major improvement in this respect.

The potential for congestion is undoubtedly the weakest points in the YBF1 scheme.

### *Finding the Right Stop*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| Very Poor | Poor | Very good | N: Very good |
| | | | S: Adequate |

The current arrangements are particularly deficient in that there is a zebra crossing from the Portico to the island outside it, but no crossing from there to the opposite side of Station Road. People new to the area often make the mistake of crossing here, thinking they can access the stops opposite. CYCSF removes this problem.

CYCSF could improve on the current arrangements provided the signage is clear enough. It is impossible to judge how good the outcome would be because no details are available yet.

YBF1 has a single concourse/waiting area for all buses, and there is plenty of space for clear signage. There is a single row of stops, all directly outside the train shed. Electronic signage above the arches leading to the stops would be readily visible from a distance.

YBF2 retains this amenity for northbound passengers. Southbound passengers would be directed to the bus stops opposite. An underpass connecting the opposite side of Station Road would make this much clearer. On the exit from the underpass there is space for clear signage pointing to the various stops.

Without the underpass YBF2 is no better than CYCSF for southbound passengers.

### *Advance Ticket Purchase*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| None | Unknown | Very good | N: Very good |
| | | | S: Good |

Dwell times are reduced if passengers can buy tickets in advance of their journey. The existing arrangements have no facilities for this. CYCSF is at a disadvantage because the stops are in the open and there is no single concourse.

YBF1 and YBF2 both make it possible to buy tickets inside the train shed (possibly with train ticket machines nearby).

### *Shelter*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| N: Good | N: Poor | Very good | N: Very good |
| S: Poor | S: Very Poor | | S: See text |

Being under an awning outside the Portico, the existing arrangements are good for northbound passengers, if congested. CYCSF is significantly poorer because all passengers are given a longer walk to the stops, and along an unsheltered route.

YBF1, by having all stops alongside the train shed wall and the concourse inside the train shed, is as good as can be achieved.

YBF2 remains very good for northbound passengers. How good or poor it is for southbound passengers depends on whether there is an underpass. Perhaps the rating should be 'poor' without an underpass and 'good' with one.

### *Tarmac Area*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| Very Poor | Good | Poor | Less |

At present, the area is awful aesthetically. Pretty well anything would be an improvement.

YBF1 had a large expanse of tarmac. YBF2 also has considerable tarmac, but it is more broken up, similar to CYCSF.

CYCSF is best in this respect, but only because the number of stops is hardly any more than at present, and we believe inadequate. No solution with enough stops is likely to be beautiful in this respect, and mitigating measures will presumably be needed.

### *Terrorist Vehicle Attack*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| Poor | Poor | Good | N: Good |
| | | | S: Poor |

The existing arrangements and CYCSF have bus stops directly alongside Station Road, making waiting passengers vulnerable.

YBF1 is the best, because the concourse/waiting area is inside the train shed. YBF2 retains some of this advantage, but southbound bus stops are on the main road.

The angled (but straight-through) stops in the maps of YBF2 are suggested because they are more suitable for buses with centre doors – buses can more easily stop close to and parallel to the pavement – but they are probably also a little better than CYCSF in this terrorism respect.

### *Dementia Friendliness and Disabled Access*

| Now | CYCSF | YBF1 | YBF2 |
|---|---|---|---|
| Poor | Poor | Very good | N: Good |
| | | | S: Poor |

Representations from the Alzheimer Society and others state a preference for a proposal such as YBF1 for their members. The use of one single location will make it far easier to provide all necessary services.

YBF1 is also likely to be best for most disabled users and those with other special needs.

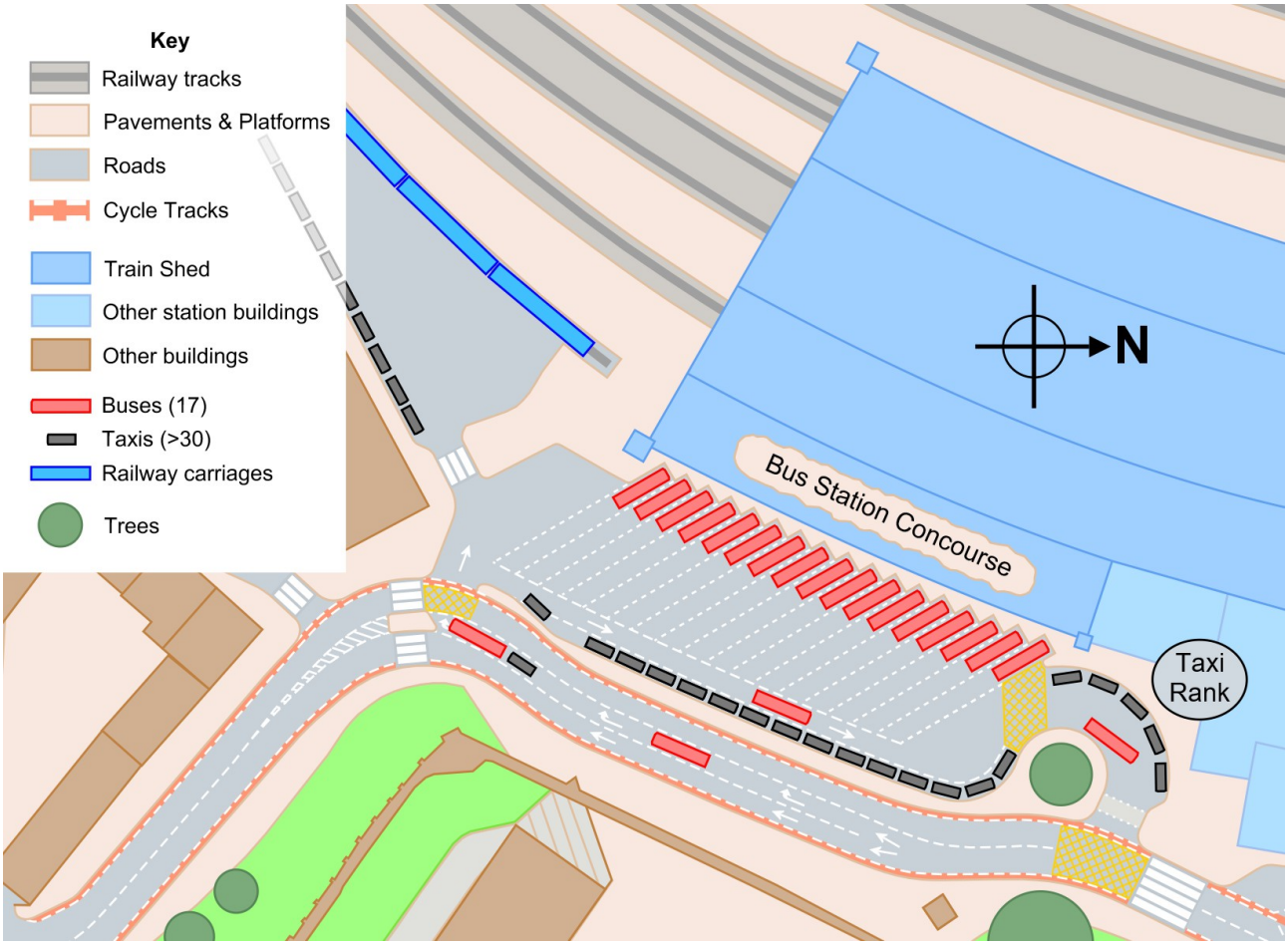
# *The Authors*

This paper was prepared by Working Group members John Bibby, Alan Dawes, Diana Robinson, and myself. I should like to thank them and others for contributions, comments, suggestions and support.

***Alan Robinson, Editor***

# *Appendix A – Original YBF1 Proposal*

There is no need to repeat the full proposal here, but this sketch map is included for readier comparison with the new alternative. Some features have been carried over to the new proposal.



# *Appendix B – Alternative YBF2 Proposal*

This second proposal is for a bus interchange in the same location as in the first proposal, and broadly where the CYC proposal puts the stops, but it provides for more stops and integrates the bus interchange more closely with the railway station than the CYC proposals do.

It is an attempt to meet the following objectives:-

a) straight-through stops for local services;

b) more direct access to the railway station than via the Portico; and

c) more stops than provided by the CYC Station Front Consultation proposal.

## *Two Options in Principle*

A straight-through alternative inevitably involves compromise.

There are in principle two options:-

a) all stops on the railway station side of Station Road, and

b) northbound and southbound stops on opposite sides of Station Road.

Option (a) offers better integration with the railway station because no passengers have to cross a road between the stops and the station, but it requires southbound buses cross other northbound traffic on the way in and out.

Option (b) offers poorer integration because passengers using southbound buses must cross to the opposite side of Station Road, but avoids conflicting paths. This proposal is along the lines of option (b).

Although the excellent access to the railway station provided by the previous proposal cannot be achieved for southbound bus users, it is largely retained for passengers of northbound and terminating services.

The location of the taxi queue and drop-off in the CYC proposal puts a barrier between the buses and the railway station. This proposal removes that objection by relocating the queue and drop-off, as did the original proposal.

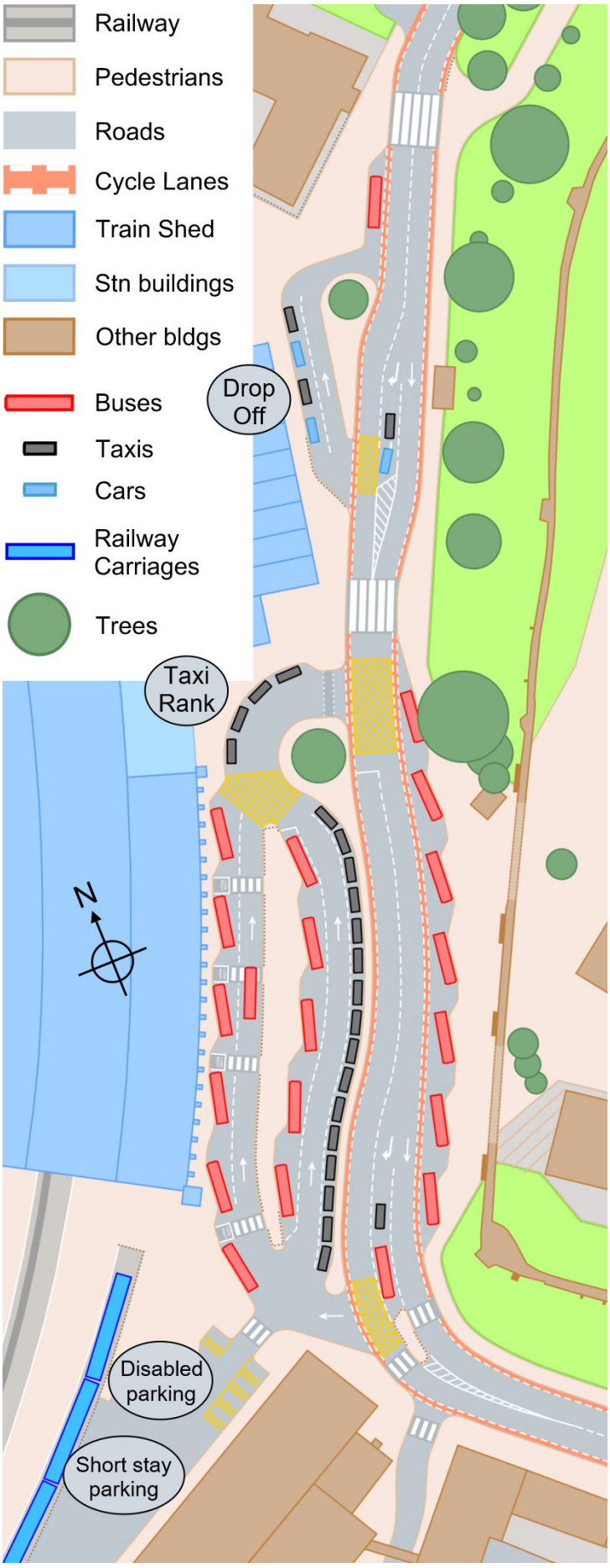
## *Number of Bus Stop Lanes*

An increase in the number of stops requires either that the stops be spread out over a longer distance, or the use of more than one lane. Unless the taxi rank is removed, there isn't much space to lengthen the lanes on both sides of Station Road, and there is also insufficient space to provide two lanes on each side. But there is sufficient space for a hybrid approach with a longer row of stops on the Bar Wall side, and two lanes on the station side.

This generates an asymmetrical layout in which there are more stops on the station side, but this is no disadvantage. More than half the stops are in the area well integrated with the station. Services terminating at the station would use these.

## *Outside The Portico and Tea Room Square*

The presence of more bus stops in the bus interchange area precludes putting the drop-off in the same area. Although the present arrangements have the taxi rank and drop-off




alongside each other, there is no reason in principle to perpetuate this in the new scheme. The previous proposal limited mention of the drop-off arrangements to the text, suggesting it go outside the Portico, but without showing anything in the plan. This proposal makes a specific suggestion, as shown. But this is only intended to be indicative of location, not size.

The simplified map below shows the general idea. It isn't precisely to scale, but near enough to give an idea of what the possibilities are.

The bay for city sightseeing tour buses is roughly where it is now, as is also proposed by CYC.

Also in line with CYC proposals, Tea Room Square and the Portico would be entirely pedestrianised, with the proviso that Tea Room Square would be an access route to the new Scarborough Bridge pedestrian/cycle crossing over the Ouse, and delivery vehicles use it.

Except for Station Road, The CYC proposals pedestrianise the entire area in front of the Portico. The extra provision for buses in this alternative proposal means the drop-off must go somewhere else. The map shows a way to put it outside the Portico.

So the CYC proposal for a grand-looking but unnecessary pedestrian crossing directly from the Portico to the opposite side of the road is abandoned and the crossings remain substantially where they are now, which is on the whole better in any case, because it shortens some walking distances.

## *South of the Portico*

In line with the CYC Station Front Consultation proposals, Queen

Street Bridge is assumed to be demolished, but the Railway Institute buildings are left intact.

The taxi rank takes up some of the space that could have been occupied by bus stops, so to achieve a significantly greater number than CYC propose, there are two lanes of stops for northbound buses. There is only one single lane for southbound buses, but it is longer. Since there are more northbound stops, it is assumed buses that turn round at the station will use these, regardless of direction. Buses from and to the north would turn on the way in to the interchange, and buses from and to the south turn on the way out.

Some northbound (and turning round) buses will stop at the island and passengers must cross the road to reach the station or bus lane nearer to it, but since buses are the only traffic in this lane, controlled crossings would not be necessary. Given the directness of these surface-level crossings, people are unlikely to use an underpass (see below) for this.

Unlike the CYC proposals, buses in both directions are able to turn round at the interchange itself, without using Lendal Gyratory, Prices Lane and Nunnery Lane, or circumnavigating the Railway Institute gymnasium building.

Compared to the previous proposal, a much smaller number of southbound buses will turn right into the interchange or out of it. Congestion concerns are thereby reduced.

A criticism of the previous proposal was the adverse visual impact of the large expanse of tarmac for buses to manoeuvre in, compared to the CYC proposals. This revised proposal reduces the total area a little, and breaks it up into smaller areas, but more buses inevitably means more tarmac in the interchange area. This consideration should not be a barrier to provision of better bus facilities.

## *Taxi Rank*

The location of the taxi rank and queue is carried over from the YBF1 proposal to this modified proposal, as the map below shows. Its merits are unchanged.

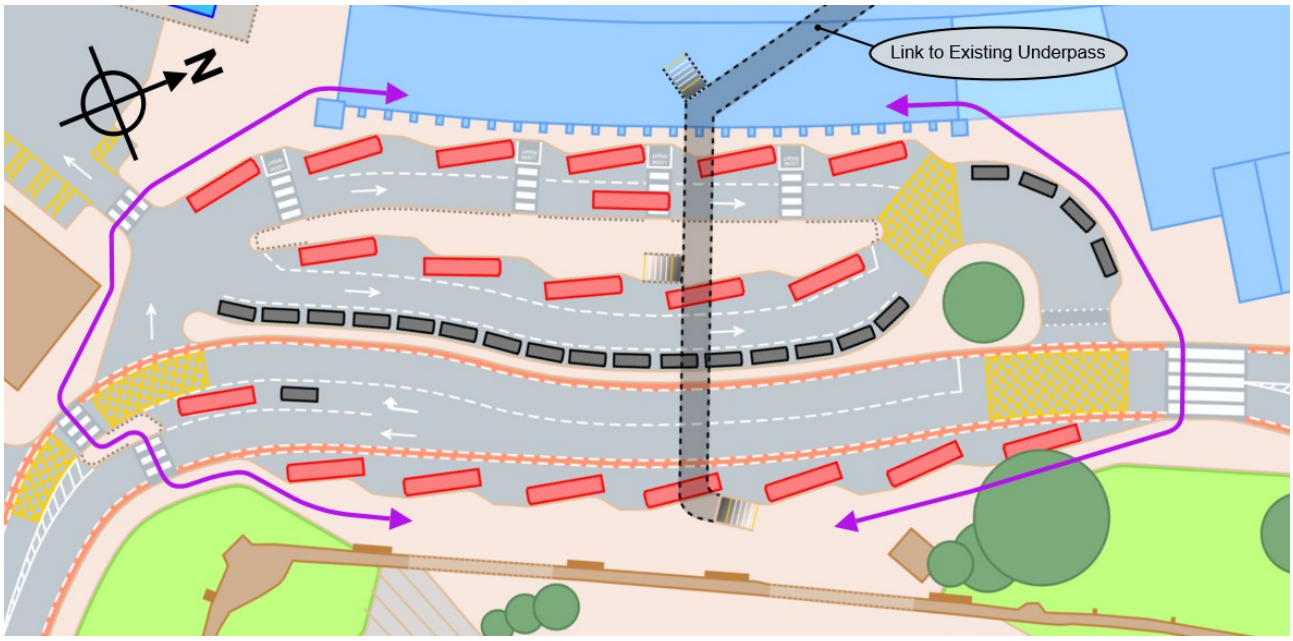
A key feature is that although the taxi rank is adjacent to the station, the waiting queue is not, so it doesn't form a barrier between buses and the railway station as it does in the CYC proposal.

## *Car Parking*

Disabled parking is presently near the long-stay car park entrance. The map shows where five bays – the same number as at present – could be fitted in, though this could clearly be expanded if need be (though the current CYC proposals reduce this to just three). The bays usefully back onto a paved area rather than the train shed wall.

Some short-stay car parking is provided where the CYC proposals put it.

## *An Underpass?*




The purple arrows in this map illustrate a problem: putting straight-through bus stops on opposite sides of the road can make the walking route from one side to the other rather too long. The number of people changing from one bus in one direction to another in the other direction will presumably be small, but the connection between the southbound bus stops and the railway station could be better, and preferably under shelter. The absence of a more direct route would encourage jaywalking.

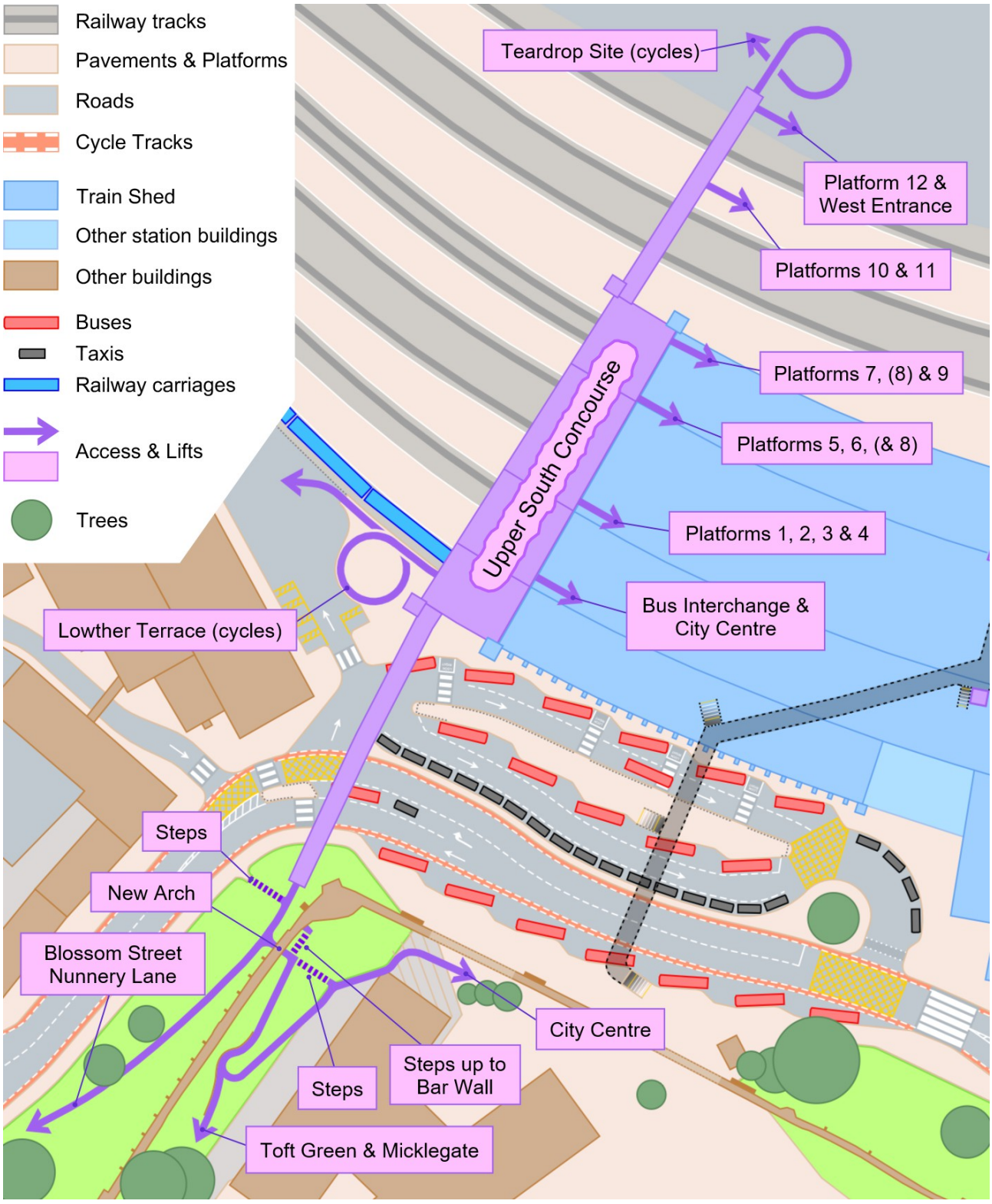
In terms of walking distance, the CYC Station Front consultation proposal is even worse because people are expected to use the splendid new crossing further north at the middle of the Portico, which is (despite CYC claims to the contrary) a loss of amenity for bus users.

The suggestion here is an underpass roughly across the middle of the development, as shown. The entrances are between buses, at points where no bus doors are obstructed, even if buses with centre doors are used.

The question of disabled access to the underpass inevitably arises. No solution is offered here because ramps would need to be of the order of 30 to 40 metres long, or lifts provided. Inside the train shed this should be possible, but near the bar walls it isn't clear how to provide such ramps in a sympathetic way. Disabled access to the island is not needed because it can be reached from inside the train shed, using the pedestrian crossings. Answers on a postcard, please!

The questions of whether or not to put an underpass here, and its exact nature and location, need early consideration, as is explained in the section below on diversion of the road during bridge demolition.

# *Appendix C - the Upper South Concourse*




This is an additional but related proposal for a bridge crossing the railway station at the south end of the train shed. This proposal remains unchanged, and still fits in with this revised bus interchange proposal. This and the bus station proposal are independent in the sense that neither relies on the other. This proposal could be implemented in conjunction with the Station Front consultation proposals, otherwise unmodified, or the bus

station could be implemented without this addition. The two proposals are however related in the sense that they are meant to work together.

The proposal is essentially the same as described in my Station Front consultation response, so there's no need to repeat all the details here. It must be emphasised that this is seen as a later addition, rather than being part of the Station Front development.

# *Appendix D - Diversion of Road during Bridge Demolition*

This section addresses objections on the grounds that demolishing Queen Street Bridge would be far too disruptive, or that diversionary arrangements would be too expensive. Knocking the bridge down would be no trivial task. Naturally enough, fears arise that doing so could cause horrendous disruption. It would be idiotic to pretend disruption can be avoided, but the worst – closing this part of the ring road – should not be necessary.

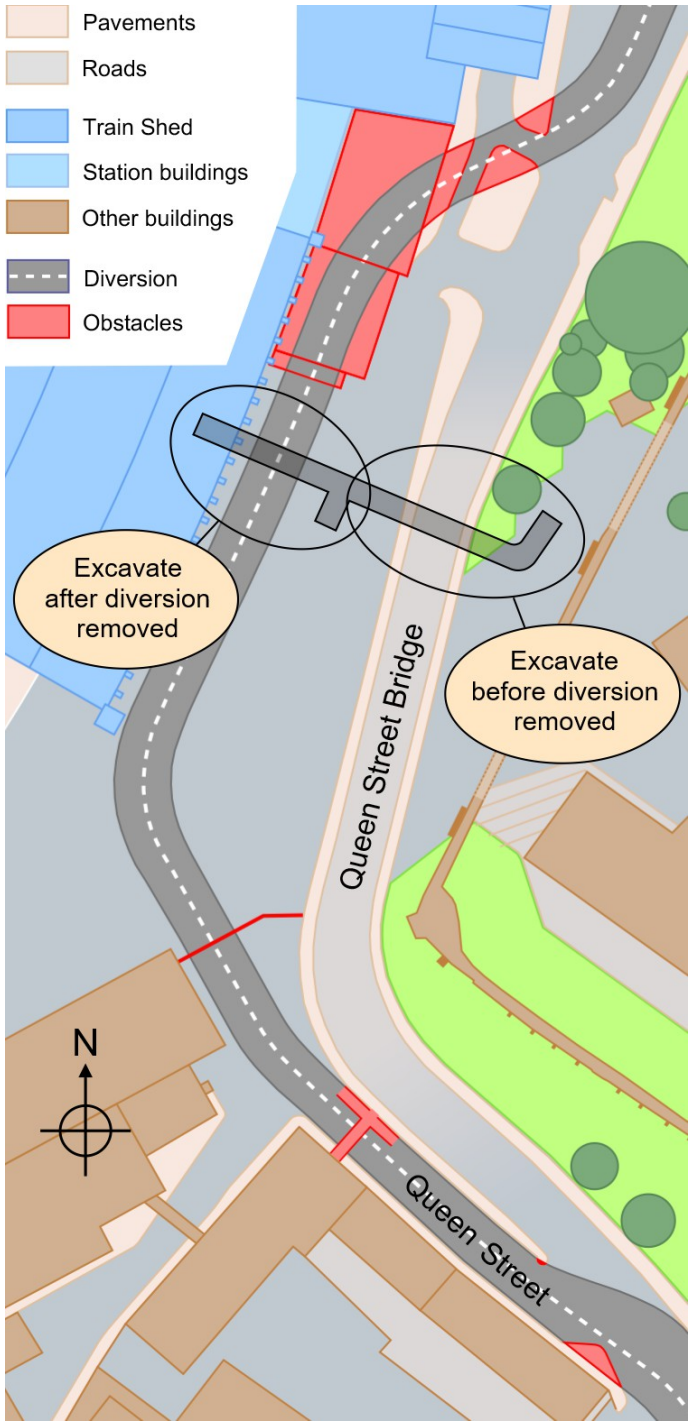
With the steps and bridge up to the Railway Institute first floor fire exit removed, and a parking ban, Queen Street looks wide enough to take two-way traffic.

The entrance to the long-stay car park is more than wide enough to take two-way traffic, with the demolition of station extensions due to be removed anyway, a bit of pavement and some railings.

So a diversionary road can be put through the car park approximately along the route shown here.

It would be cheap enough: for most of its length the diversionary route is over tarmac that already exists. All that's needed is to paint some white lines on it.

The most disruptive work is not bridge demolition – the diversion is clear of that – but removal of the approach ramps, especially the one at the south



end, opposite the Queen Street terraced houses. Tricky parts of that operation might require night-time closures.

## *Excavating the Underpass*

The map also shows why it is wise to think about an underpass very soon. The least disruptive time to excavate it is during the bridge demolition phase. The easterly half would be dug out after the bridge has been demolished but with the diversion still in place. The westerly half can then be dug out when the new road is in place and the diversion abandoned.

The important point is that these excavations are far easier while the bus stops are still in their present location outside the Portico. Once the new interchange is in use, and the stops outside the Portico abandoned, digging an underpass here would be more costly and far more disruptive.