

Technical Note

Title	22/01878/P – Response to Highway Comments			
Prepared by	DRT	Checked by	DRT	Reviewed by
Date	August 2022		Version	4.0

1. Introduction

- 1.1. This note has been drafted in response to the Council's highway comments dated on 12th July 2022 in relation to outline application 22/01878/P for Land at Broom Hill/Brislington Meadows Broomhill Road Bristol BS4 4UD. The proposed development is an outline application for up to 260 residential dwellings together with pedestrian, cycle and vehicular access, cycle and car parking, public open space and associated infrastructure. Approval is sought for access only with all other matters reserved.
- 1.2. Comments from the highways officer that required a response have been copied in the shaded text boxes below for ease of reading.

2. Highway's comments

Streets and Links

- 1 Indicative Primary Street
- 5 Indicative Secondary Streets
- 2 Public Rights of Way (Bonville Rd to Belroyal Ave and Bonville Rd to School Rd)
- 1 Pedestrian link (Allison Rd to E-W Link)

By definition the Primary Street would need to connect with the All User access from Broomhill Road. We are not clear, beyond this, what aspect of the Indicative Primary and Secondary Streets would be secured as part of this application as layout is a Reserved Matter. This should be clarified.

- 2.1. The Design Code submitted with the application sets out the design approach and key street design principles for these routes. This would be secured by planning condition and future detailed planning applications would need to comply with the Design Code at reserved matter stage. The main all user access and junction into the site from Broomhill Road is for approval as part of this outline planning application, as per the details shown on KTC Drawing 1066-007D. Future design of the primary street will then connect to this access and comply with design detail in the Design Code.

Whilst we support the upgrading of the pedestrian and cycle routes through the site, given that these are not fully worked up and that the application is only for Access it is not clear what would be secured beyond needing full details of these at Reserved Matters.

Further details on accesses

The TA provides additional details of how the works to each access could look.

1. Primary Access

The sole access would be a priority junction on to Broomhill Road. This allows for a refuse truck to enter whilst another vehicles waits to turn right out. 85th percentile speeds are 29.7mph NB and 30.8mph SB and the junction has been designed to these.

Although this would be the sole vehicular access an emergency access would also be secured as well as a number of pedestrian and cycle links. For this reason we are comfortable with the proposal to service up to 260 dwellings from one access providing it is built to a high standard and the alternative ped/cycle/emergency accesses are secured.

The access (shown indicatively on 1066-007 D) should be secured by condition with details including a Stage 1 Road Safety Audit to be submitted at Reserved Matters. It will need to be built prior to first occupation.

- 2.2. We have proposed a Stage 1 Road Safety Audit (RSA) to be undertaken on all the access points and have now sought to agree the scope for this on the back of the first round of comments from BCC Highways. An RSA brief and CVs of an independent audit team have been submitted to BCC for approval.

2. Emergency access

An emergency access from Bonville Road is shown on drawing "PROPOSED SITE ACCESS - 1066-014 Rev –"

The emergency access would provide some redundancy once the site is fully built out.

Given construction is also proposed from Bonville Rd the phasing of the emergency access would need careful consideration. It may be possible for the construction link to also provide an emergency access. Also, the need for an emergency access only comes into play once the site is largely built out and so we would suggest that a trigger for the opening of the emergency access should be linked to the occupation of the 150th dwelling.

So, the principle of an emergency access from Bonville Rd should be secured with details of construction and phasing to be agreed.

Link To Park

The link to Victory Park potentially provides important traffic free onward connections. Further details should be provided of if and how such improvements are to be secured.

- 2.3. The link into Victory Park is not a public right of way. The proposals are to retain the link as a leisure route for access to the park from the proposed development, and as such would be unsurfaced.
- 2.4. The site location "red line boundary" submitted with this outline planning application that extends into Victory Park was shown to include the proposed surface water sewer connection required. The existing link from the site to Victory Park is in an ecologically sensitive area, with many retained trees, which limits significant works to alter the gradient along the route. However, remediation following the

sewer construction could include wooden steps etc to improve the route, subject to approval from BCC Parks Department. We have approached BCC Parks Department to discuss this matter, but the detail of the route could be conditioned.

Detailed Layout

This application is an outline application with only approval of access sought. Other matters relating to layout, scale, landscape and appearance are reserved. Therefore we are not agreeing the detailed design of the site. A number of documents have however been provided that we wish to comment on. Furthermore, we would like to set out the matters that will need to be resolved at the RM stage.

Indicative Master Plan

Whilst an indicative masterplan has been submitted to show how the site COULD be developed, we have not assessed this in detail as it is only indicative. Should the proposal be recommended for approval we would want to be satisfied that the implicit details in the indicative layout are not being explicitly approved.

Design Code

The Design Code sets out requirements and principles RM can be assessed against.

It sets out lots of good design principles including:

- If a steeper street is required then a shallower alternative should also be available.
- Clutter free streets designed for 20mph
- Primary streets should have 5.5m carriageway and 2m footways
- Houses should be set back 1.5m or 2m where bin and bikes stores at front
- There should be a 1.5m verge on at least one side for trees

It also provides illustrative following sections which show the following widths:

Primary Street

1.5m defensible space / 2.0m footpath/ 1.5m green verge/ 5.5m carriageway/ 2.0 m footpath/(4.8m on street parking)/ 1.5m defensible space with localised narrowings at green spaces and where main pedestrian routes cross.

Secondary Street EITHER

1.5m defensible space/ 2.0m footway/ 5.5m carriageway/2m footway/ 1.5m defensible space OR

1.5m defensible space / 4.8m on plot parking/ 7.5m pedestrian priority street/1.5m defensible space

Parking

Parking should accord with these principles:

- Group driveways in pairs
- No more than 6 parking spaces at a time
- On street unallocated parking for visitors
- On street parking should only be on one side (although this can alternate)

- No more than 3 parallel or 6 perpendicular spaces at a time
- Maximum of 20 spaces in parking courts which should be overlooked

These design standards are considered sensible and accord with our evolving design standards and national guidance. The only area we would stress is that on street parking cannot be allocated and must be adopted (we cannot have islands of allocated private parking surrounded by adopted highway).

It is not clear how the Design Code would be secured or how enforceable it would be.

- 2.5. The Design Code would be part of the approved planning documents and secured by condition to ensure future reserved matters applications comply with the detail and design principles in the Code.

Proposed Contour and Retaining Wall plan

This plan is problematic. It shows much more level of detail than would be expected at Outline. It shows extensive details of contours and retaining walls including retaining walls that retain the highway. We would not be able to support this permission if we were granting permission for this plan as we would essentially be approving the detailed design. So, can we ask that this plan is either withdrawn or made indicative or changed in some other way such that we are not seen to be approving the detailed highway layout and gradients.

- 2.6. The plan has been amended and marked as indicative (see Indicative Contour and Retaining Wall Plan drawing no. DR-C-5001-P4). It was included to demonstrate the technical work undertaken in the evolution of the masterplan. The Contour and Retaining Wall plan has been used to inform the illustrative masterplan, and is the result of technical work looking at topology, ecology etc, to determine the proposed number of units that can be accommodated on the site (up to 260 homes).

Note on gradients

The contour plan demonstrates the tension there will be between earthworks and gradients within this hilly site. We would note that there is an approximately 35 m height difference between the top and bottom of the site and it is very likely that, when the detailed layout is submitted, roads will be steeper than 1 in 20 in places. It would need to be demonstrated that the site has been made as accessible as possible within the constraints on the site – ie that accessibility is As High As Reasonably Practicable.

We consider that it would be difficult to sustain an objection solely on gradient grounds if all other matters were resolved and the developer could demonstrate that they had made all reasonable efforts to make the site as accessible as possible. This is a developing area and we are not aware of specific case law that defines when gradient alone can be grounds for refusal.

- 2.7. As set out in the submitted Design and Access Statement, the proposals have been designed to work with the natural topography/land form of the site as much as possible. This has helped enable the masterplan to:

- Retain more trees and hedgerows for ecology;
- Deliver up to 260 new residential dwellings, including affordable homes;
- Reduced engineering, i.e. concrete retaining structures and earthworks to create development platforms;
- Naturally facilitated surface water drainage to the lower part of the site beneath overhead power lines;
- Managing building heights and visual prominence of the scheme that may have resulted from using retained development platforms;
- Minimising overlooking on existing residents and potentially protecting their views as new homes step down the slope;
- Allows the design to incorporate more gradual paths to overcome steep gradients that could be caused by retained development platforms;
- Balance cut and fill across the site;
- Creating accessible streets and minimising the amount of level change on the primary and secondary streets;
- Ensuring a positive and level interface between the development plots and the existing hedgerow and green space areas with easy movement and to prevent the encroachment into root protection areas (RPAs) of existing trees;
- Where possible provide accessible pedestrian cycle routes through the development
- Creating flexibility on plot for a variety of detailed design solutions- split level, semi split level, terraced garden walls etc, and
- Capture the best key views out of the site from the upper reaches of the site.

2.8. Based on pre-application advice received from the Council, the team had looked at keeping all roads as a minimum gradient of 1:20 slope. This was undertaken in conjunction with the extensive ecology/arboricultural impact assessments and consideration of where earthworks are not possible in the rootzone of retained trees and where hedgerow and other vegetation is being retained. With the steep natural gradients, particularly at the western end of the site, 1:20 roads would have resulted in retaining walls of 6m and retaining walls between properties of 5m. This was considered excessive and would create a poor environment and relationship with the surrounding area. Therefore, in some instances it may be possible roads will be steeper than 1:20, and in that situation alternative routes for pedestrians were included.

2.9. The constraints are shown in the isopachytes plan (Drawing 13492-CRH-XX-00-DR-C-5007-P1) showing the cut/fill of the site overlaid onto the tree survey, which was requested by the City Design Group and is appended to this note. The plan shows area of cut in red and fill in green, with the white areas around retained trees/hedges showing no or minimal works in the root protection zones. To the east of the site, the alternative accessible pedestrian route is clearly shown as a pink path between trees.

2.10. This is reflected in the Design Code which in 7.1 states:

“The carriageway should have a gradient of 1:20 wherever possible so footways alongside the road provide suitable access for all. Where topography doesn’t allow 1:20 without excessive earthworks or retaining walls an alternative pedestrian route should be accommodated at 1:20 gradient wherever possible”

All future reserved matters detailed application would need to comply with this principle.

Public Rights of Way

The application seeks to divert and improve BCC/478 and BCC/482 which cross the site, and the developers have also recently deposited a Section 31(6) statutory declaration to formalise public rights to use other informal paths across the site, to be followed by a process of formally diverting them to align with the interconnecting pedestrian and cycle access routes designed to enable good permeability across the site.

PROW BCC/478 runs across the eastern section of the development, and PROW BCC/482 runs across the southern part of the development site from east to west. Both will be retained on their general course but with the intention to realign onto new paths constructed across the site, and so a public path diversion order under the Town & Country Planning Act 1990 will be required as part of the planning process. No development should take place over the existing PROW routes prior to the confirmation of the diversion order.

PROW BCC/478 will be crossed by an access road into the development and appropriate warning signage and other safety measures will also need to be put in place.

The application notes that the visual impact of the new development would be most acute for users of the PROW traversing the site and this would be adverse given the change from an area of open grassland. It is noted that the realigned PROW are proposed to run through retained areas of open space and woodland in the indicative master plan; it will be important to ensure that the boundary treatments and landscaping around the PROW routes retain as much of an open and green space feel as possible.

The PROW Team will require continued involvement in agreeing the finalised alignment of the diverted existing PROW and the other routes to be dedicated as PROW, the diversion order process, and the design of the new routes.

- 2.11. As you are aware, there has been continued discussions with BCC's PROW Team, which will be ongoing as existing walked routes are formalised, and then diverted or stopped up through the appropriate legal applications.

Consideration would also need to be given to public access and safety for users of the PROW during construction work. As construction works are likely to require the temporary closure or diversion of the PROW, a Temporary Traffic Regulation Order (TTRO) will be required for the duration of the works on the grounds of safety of the public.

- 2.12. Any PROW crossing the site (either existing, those formalised or diverted) during the construction phase will be addressed in the Construction Traffic Management Plan, which will be conditioned. This will set out safety and management measures for maintaining PROWs across a construction site.

Flooding

A good SuDS scheme is proposed, restricting the discharge rate so as not to increase the downstream flood risk on School Road that has historic flooding issues. Wessex Water would need to confirm approval of the sewer connection and BCC Parks team acceptance of the drainage ditch outlet.

2.13. BCC's flood risk officer has commented on the drainage strategy

The initial drainage plans submitted for this site are acceptable overall. The SuDS measures proposed will provide benefits in terms of water quality, amenity value and biodiversity. Keeping the discharge rates to the existing QBAR greenfield runoff rates will help manage water quantity. By containing large volumes on site will help avoid an increase in the downstream, off site flood risk. This is important since there have been flooding problems on the lower levels Victory Park that flow over onto School Road. Confirmation from Wessex Water that the proposed sewer connections are acceptable will be required. As will the confirmation from BCC Parks team concerning the outlet to the drainage ditch.

2.14. We have liaised with Wessex Water with regards to a connection to the sewer and they have provided us with the proposal that is presented in the illustrative masterplan. We have also consulted the Urban Design Group (Nitin Bhasin) and Bristol's Flood Risk Officer (John Stevens) who have indicated that the proposed alternative connection to the drainage ditch would also be acceptable.

Details for RM

The following matters would need to be resolved at RM stage:

- Quantum and design of cycle parking to meet relevant local and national standards
- Quantum and design of bin storage to meet relevant local and national standards
- Quantum and design of disabled parking to meet relevant local and national standards
- Quantum and design of Electric Vehicle parking to meet relevant local and national standards
- Tracking to be provided for a refuse truck/ fire engine including turning heads where appropriate
- Adequate forward visibility is achieved in line with design speed
- Appropriate use of materials in line with BCC adoption standards
- Agreed limits of adoption
- Details of rerouted PROWS
- Wayfinding
- Any Highway Structures will require Approval In Principle.
- Agreement of any green infrastructure to be adopted
- Agreement of any novel drainage infrastructure (eg SUDS) to be adopted
- Construction Methodology
- Details of phasing
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Where appropriate a condition requiring details should be sought although where it is purely a layout matter then it may not be necessary to impose a condition and Outline stage.

Mitigation

Having considered the full impact of the development as set out in the TA, we consider that significant improvements to walking, cycling and public transport infrastructure are required to ensure that the additional pressure is adequately mitigated. Furthermore, we would expect a Travel Plan will deliver a range of measure to further ensure the development is sustainable.

Some mitigation measures are either directly linked to the access, or are an integral part of the proposed development (such as public right of way upgrades) or have been offered by the developer as part of the application (Broomhill Road Traffic calming). However, as identified by the pedestrian and cycle audit a

number of serious gaps in the connections have been noted and a package of mitigation measure along the main corridors to the site would be required. The routes audited were:

Route 1 – Eastern Pedestrian access to Brislington Retail Park

Route 2 – Eastern Pedestrian access to Oasis Brislington Academy

Route 3 – Eastern Pedestrian access to St Brendan's Sixth Form College

Route 4 – Eastern Pedestrian access to Industrial Area

Route 5 – Broomhill Road access to Broomhill Shops

Route 6 – Fermaine Avenue access to Broomhill Shops

Route 7 – Fermaine Avenue to Sandy Park Road

Route 8 – School Road access to Sandy Park Road

In our view the most significant shortcoming in terms of accessibility to the site is the connection to Emery Rd which then leads to Oasis Academy and St Brendans as well as a range of bus routes, particularly as this is likely to be heavily used by schoolchildren. The connection using Bonville Rd and Emery Rd is through the Brislington Trading Estate where large numbers of HGV movements are likely to be present.

Until this has been further analysed we are unable to support this proposal. Before we could make a positive recommendation new would need to see a package of measures to rectify the deficiencies identified (with a particularly focus on Route 2 – Eastern Pedestrian access to Oasis Brislington Academy and Route 3 – Eastern Pedestrian access to St Brendan's Sixth Form College). One particular area where we think there is potential is for a shared use walking/ cycling route along one side of Emery Rd within Brislington Trading Estate). We are also aware that there is likely to be significant opposition to removing car parking and so measures should consider how best to control parking to avoid problematic pavement parking in such a way as to deliver a good route for pedestrians and cyclists whilst retaining the car parking that the industrial estate needs to operate.

2.15. It is agreed that these are key routes for pedestrians and cyclists, especially school children.

Secondary school pupils have been observed using the footpath link from Belroyal Avenue then travelling along Bonville Road and Emery Road. With the proposed development including new pedestrian cycle links, pupils are more likely to travel though the site and emerge via the proposed footpath/cycle path access onto Bonville Road.

- 2.16. We have looked at the route in more detail, and proposals are shown on Drawings 1066-020, appended to this note. The proposals for the route from the site access to the school and college is described below.
- 2.17. Drawing 1066-020-02 includes the proposed pedestrian/cycle/emergency access included in the Transport Assessment. The pedestrian crossing of Bonville Road would be set on a speed table to reduce vehicle speed, but also to provide pedestrians with a level route. This section of Bonville Road is not a vehicular thorough route, and vehicle flows are relatively low. We therefore propose that cyclists use the carriageway.
- 2.18. There is a small vehicular access to the rear of units 20-22 Bonville Road, shown on the photograph on sheet 02. It is proposed that the bellmouth removed and replaced with a footway crossover, to give pedestrians priority.
- 2.19. Just to the south, the footway crosses a concrete yard that extends across the footway to the carriageway, shown in the photo on sheet 02. This can lead to parking on the footway and the pedestrian route is not clearly defined. It is proposed to colour the pedestrian route in a contrasting colour to delineate the pedestrian route, discourage parking and highlight the possibility of pedestrians to drivers.
- 2.20. As the site is primarily an industrial estate, the palette of pedestrian improvements is more limited. Reducing radii at junctions is not an option due to the required swept paths of articulated lorries. Vertical features such as continuous footways across junctions are also likely to be damaged by HGVs. Therefore, for the junction of Dixon Road, it is proposed that dropped kerbs and tactile paving introduced, and the pedestrian route across the junction highlighted in contrasting surfacing, with the give-way lines set behind, shown on sheet 1066-020-03. Depending on changes to national guidance/legislation, these crossings could be shown as implied zebra crossings.
- 2.21. Further south on Bonville Road, the vehicle service centre on the site of the former fire station routinely has vehicles parked part-way on the footway, and sometimes on double-yellow road markings. Where the main service yard is, a continuous dropped kerb is required. In this location, Double-yellow lines would be proposed, and enforcement required.
- 2.22. Sheet 1066-020-04 shows a crossing of Clothier Road similar to that of Dixon Road.
- 2.23. Emery Road is considered the best link from Bonville Road to destinations to the east. The footways on Emery Road are separated from the carriageway by a grass verge, which helps deter pavement parking. Of the two sides, the eastern/northern side has the fewer number of yards fronting onto the road, so less areas of potential pedestrian/vehicular conflict.

- 2.24. The footway on Emery Road is proposed to be widened to 3m. This could potentially be used for a shared use path, although given the low traffic flows and speeds, more confident cyclists could use the carriageway. Where the footway crosses an access, the route would be coloured to highlight the potential conflict to drivers.
- 2.25. At the mini roundabout junction of Emery Road and Broomhill Road, dropped kerbs and tactile paving will be installed on the eastern, northern and southern arms. This provides access to the footway on the southern side of Broomhill Road to the college, and to the shared footway/cycleway on the western side of Emery Road which leads to the crossing on A4 Bath Road and on towards Oasis Academy Brislington.
- 2.26. As with the other offsite highway works, the works on Bonville Road/Emery Road will be either secured by condition for s106.

Public Transport

The nearby bus facilities are basic and it can be expected that demand will increase at these stops as a result of the new development. New and upgraded public transport facilities are required, in order to provide a more viable alternative to the private car and to encourage modal shift. The upgrade should include the provision of Real-time Information displays, raised kerbs and, for 2 locations, new shelters. The total package of measures to upgrade of 5 bus stops in the vicinity of the development would cost £143,208.

TROs

Based on the current outline plans, but depending on the outcome of detailed proposals, we will need separate individual TRO fees for:

- New ped crossing on School Road
- New road humps -School Road (crossing site) & Bonville road (emergency access site)
- Area wide waiting restrictions – new “adopted” development roads and roads surrounding the development site
- 20mph on new adopted roads within development site

A contribution of $4 \times 6,310 = £25,240$ would be required for these Traffic Regulation Orders.

If a package of measures can be agreed then it would need to be secured via a s106. Failure to agree an acceptable package of measures to ensure the site can be reached in a safe and accessible way would be likely to result in a recommendation to refuse the development on transport grounds.

Travel Plan

An acceptable Framework Travel Plan that has been submitted. It is proposed that Bristol City Council (BCC) would be appointed as Travel Plan Co-ordinator. BCC will therefore be responsible for

implementing appropriate Travel Plan measures and monitoring. This would need to be secured via a s106 agreement at a cost of £220 per dwelling.

Conditions and S106

Should all the matters set out above be resolved to our satisfaction such that we could support a recommendation to grant planning permission a wide range of conditions and s106 measures would be required. These would be expected to include:

Mitigation to be secured by condition or s106 as appropriate:

- Accesses including tying in to adjacent streets
- Upgraded links through site
- Upgrades to key walking and cycling links to the site
- Upgrade to public transport infrastructure
- Travel Plan
- TROs

A large number of details will need to be agreed. Some of these can wait until the Reserved Matters submission as they are inherently linked to the design whereas others are key principles which must be secured at outline. We would welcome discussion on which of the following sit in the former and which sit in the latter category. Measures that will need to be secured whether at outline or RM stages are:

- Quantum and design of cycle parking
- Quantum and design of bin storage
- Quantum and design of disabled parking
- Quantum and design of Electric Vehicle parking
- Tracking to be provided for a refuse truck/ fire engine
- Adequate forward visibility is achieved in line with design speed
- Appropriate use of materials in line with BCC adoption standards
- Agreed limits of adoption
- Details of rerouted PROWS
- Wayfinding
- Any Highway Structures will require Approval In Principle.
- Agreement of any green infrastructure to be adopted
- Agreement of any novel drainage infrastructure (eg SUDS) to be adopted
- Construction Methodology
- Details of phasing
- Internal Highway Works Condition (s38)
- External Highway Works Condition (s278)

A corresponding range of advices would also be required.

- 2.27. Almost all of the issues above such as quantum's and design will depend on final layout and unit numbers and will be addressed at Reserved Matters stage. The submitted Design Code provides some detail design principles in relation to design of things like car parking, cycle and refuse storage

and would be secured by planning condition so that future detailed applications must comply with these principles.

2.28. The public transport contribution is agreed and will be secured via the S106 agreement.

3. **Summary**

3.1. This note addresses some of the comments, but it is noted that some comments/questions can only be addressed at the reserved matters stage, when the site layout and housing numbers are finalised and agreed.