



## **TOWN AND COUNTRY PLANNING ACT 1990 APPEAL UNDER SECTION 78**

**Appeal by Berkeley Homes**

**Against the decision by Reading Borough Council to refuse Planning  
Permission for:**

**Demolition of existing structures and erection of a series of buildings ranging in height from 1 to 11 storeys, including residential dwellings (C3 use class) and retail floorspace (A3 use class), together with a new north-south pedestrian link, connecting Christchurch Bridge to Vastern Road**

**Site Address: 55 Vastern Road, Reading, RG1 8BU**

**Planning Inspectorate Reference No.: APP/E0345/W/21/3276463  
Planning Reference No.: 200188**

**Rebuttal of Appellants Proof of Evidence on Highway/Transport  
Matters**

**Darren Cook of Reading Borough Council  
October 2021**

## **Index**

1.0	Introduction and Scope of Rebuttal	Page 3
2.0	Rebuttal of Appellants Transport Proof of Evidence	Page 4
2.1	North-South Link Rationale	Page 4
2.2	Mr Doyle's Alternative Scheme Options - Review	Page 11
2.3	Towpath Connection	Page 14
3.0	Summary of Rebuttal Evidence	Page 20

## **Figures**

Figure 1 - Junction 11 North Bridge	Page 7
Figure 2 - Junction 11 East Bridge	Page 7
Figure 3 - Junction 11 South Bridge	Page 8
Figure 4 - Kennet Walk Footbridge	Page 9
Figure 5 - Image of 90 degree bend on Christchurch Bridge	Page 12
Figure 6 - Aerial image of 90 degree bend on Christchurch Bridge	Page 12
Figure 7 - Image of where the A33 switchback and Towpath meet	Page 16
Figure 8 - Inclusive Mobility Ramp Gradients	Page 18

## **Tables**

Table 1 - LCWIP Route Selection Tool Assessment	Page 4
---	--------

## **Appendices**

Appendix 1 - A33 Cycle Path Map	
Appendix 2 - Junction 11 Cycle Routes	
Appendix 3 - Junction 11 Planning Application Drawings	
Appendix 4 - Kennet Walk Ramp Arrangement	
Appendix 5 - Design Manual for Roads and Bridges standards, CD 353 - Design criteria for footbridges	
Appendix 6 - BS 8300-1:2018 Design of an accessible and inclusive built environment Part 1: External environment – Code of practice	

## **1. Introduction and Scope of Rebuttal**

### **Scope**

- 1.1 The below sections set out rebuttal evidence in response to the Appellants Transport Proof Evidence including Appendices A-K and are broken down into specific key areas which are:
  - North-South Link Rationale
  - Mr Doyle's Alternative Scheme Options - Review
  - Towpath Connection
- 1.2 I must advise that the fact that a matter in the Appellant's Transport Proof of Evidence has not been specifically addressed within this Rebuttal should not be taken as an indication that it is accepted by the Highway Authority.
- 1.3 I would also like to advise that the Appellants Transport Proof of Evidence now includes updated vehicle tracking (Appendix G) and confirmation at paragraph 7.2.2 that the turning head will include appropriate enforcement to prohibit loading / unloading from occurring within the turning head. Following receipt of this new evidence the Highway Authority are now satisfied that the development will not result in any further reversing movements over the footway / cycleway, over and above those previously agreed and associated with refuse collection. Subject to appropriate parking enforcement measures being secured via a suitable mechanism, the proposed servicing facilities are acceptable. In this regard, RBC has withdrawn all its' objections raised within Section 4.5 my PoE 'Servicing/vehicle movements and pedestrian/cycle safety'.
- 1.4 A further Statement of Common Ground has been agreed with the Appellant to address this.

## 2. Rebuttal of Appellants Transport Proof of Evidence

### 2.1 North-South Link Rationale

Paragraphs 5.2.2 - 5.2.4

- 2.1.1 The Appellant has undertaken an assessment of directness utilising Appendix D - Cycling Route Audits found within the Reading Borough Local Cycling and Walking Infrastructure Plan. The assessment undertaken by the Appellant has identified that the proposed route through the site would be more direct than the corresponding vehicular route, which is accepted by the Highway Authority. However, this tool is not only to be used to assess the comparison between a proposed cycle route and the alternative on carriageway route but to also compare against two or more proposed cycle routes. This is to ascertain which route would be most suitable. It is noted that the Appellant has not undertaken any assessment of the routes which have been put forward as part of the Councils Design Statement of Case. I have therefore undertaken this assessment and the results can be found within Table 1 below:

Table 1 - LCWIP Route Selection Tool Assessment

	Appellants Proposed Route	Councils Alternative route Figure 13 Design SoC	Councils Alternative route Figure 14 Design SoC	Councils Alternative route Figure 15 Design SoC
Motor Vehicle Length (km)	1.2	1.2	1.2	1.2
Cycle Route Length (km)	0.815	0.783	0.777	0.763
Ratio	0.68	0.65	0.65	0.64
Directness Score for Route	5	5	5	5

- 2.1.2 This assessment has established that each of the routes suggested by the Council would result in a ratio factor lower than the scheme presented by the Appellant, with the lowest ratio factor presenting the most preferable route. The outcome of this assessment confirms that all of the Councils alternative proposals as being more direct than the Appellants proposal and therefore more preferable when assessed utilising this tool.

#### Paragraph 5.2.5

- 2.1.3 The Appellant has replicated the switch back design on a grass surface and has claimed that this would mimic a 1:21 gradient. Although it is accepted that the grass surface would result in slower speeds than a made surface the applicant has provided no evidence to confirm that the speed on the grass would be comparable to the 1:21 gradient. The proposed cycle speeds presented by the Appellant can therefore not be accepted by the Highway Authority. In any case the Appeal scheme is longer than the corresponding alternative designs presented by the Council and consequently would take longer to cycle, therefore the Appeal scheme would not provide for the most direct route through the site.

#### Paragraph 5.3.3

- 2.1.4 It has been claimed that any design that removes the proposed switchback and replaces it with a straighter alignment would require ramps to extend further south into the site. It is further claimed that this would be of disbenefit to those accessing the ramp from properties in the northern areas of site as well as those using the towpath. However, as highlighted at Figure 12 of Appendix G Urban Design Statement of Case and previously referenced at Paragraph 4.3.12 and 4.3.13 of the Highway Authorities Proof of Evidence it has been evidenced that alternative designs are possible that would not require ramps to extend as far south into the site as that identified within the BHOC Design Addendum. The Councils alternative schemes would in fact be comparable to the Appeal scheme and this is further evidenced at Appendix A of the Councils Design Rebuttal Proof, which provides a further alternative design.
- 2.1.5 Should the switch back design be removed and replaced with a more direct route able bodied pedestrians would not be disadvantaged by a straighter route because they could utilise the existing steps provided as part of the bridge structure accessed from the Towpath. In addition, the Councils alternative schemes that found at Appendix A of the Councils Design Rebuttal Proof extend the ramps no further than that proposed by the Appellant. Able bodied pedestrians would therefore be provided with the same level of accessibility as that presented as part of the Appeal scheme creating no disbenefit. Appendix A of the Councils Design Rebuttal Proof does now include a gentle sloping route at a gradient of 1:21 as opposed to the 1:15 gradient proposed by the Appellant. This route is longer in length at 25m when compared to 18m presented as part of the Appeal scheme however any disbenefit created by the additional length is mitigated by the removal of the 1:15 ramp and replacement with a gentle sloping 1:21 path, which is not classed as a ramp.

#### Paragraph 5.3.4

- 2.1.6 The Appellant provides evidence that switchback designs have been included within Reading to facilitate pedestrian and cyclist movements and have listed locations along the A33, Junction 11 and a bridge along the River Kennet (east of Kennet Walk). These facilities would have been designed in accordance with the Technical Design standards at the time of their delivery and relate to the constraints of those individual sites. However, I comment on the listed sites as follows:

## A33 western side at Rose Kiln Lane to connect to the River Kennet towpath (strategic)

- 2.1.7 The switchback design provided along the A33 Rose Kiln Lane provides a multitude of connections between the footway / cycleway on the eastern and western side of the carriageway as well as the Towpath along the River Kennet. This switch back link should not be looked at in isolation as this is just one section of a wider set of connections for cyclists and pedestrians that take into account the limitations of the A33 and Rose Kiln Lane carriageway as well as the junction to the north and the River Kennet.
- 2.1.8 Please refer to Appendix 1, which illustrates the multitude of connections within the vicinity of the switch back in question. It is also important to note that this switch back facility would mainly accommodate those travelling between the Towpath and the south via the A33, in which the switch back would be the most appropriate design solution.
- 2.1.9 Should a straight route to the north be provided in place of the switchback design the northern point of the ramp would conclude in the centre of the signalised junction. This would therefore make any straighter route impossible to design within the space available at the time. In addition, the vast majority of those travelling north towards the Town Centre are likely to continue their journey along the Towpath.
- 2.1.10 As stated above it should also be noted that the switch back design is fundamentally to link a leisure route along the Towpath to the Strategic route along the A33. As is agreed by all parties the pedestrian / cycle route through the Appeal site is to be a continuation of a strategic link in its own right and therefore is not comparable in this instance.

### Junction 11

- 2.1.11 Junction 11 provides a footway/cycleway that is at a significant height to clear the live carriageway beneath. Having reviewed the planning application for the Junction 11 scheme it is noted that these height clearances range from 5.7m and 6.45m. The images below (Figures 1 - 3) of the footbridges themselves provide context to appreciate the heights in question.

Figure 1 - Junction 11 North Bridge



Figure 2 - Junction 11 East Bridge



Figure 3 - Junction 11 South Bridge



2.1.12 The footbridge itself also includes several connections across the junction as can be seen from Appendix 2, which provides a layout of the footway / cycleway connections. It is therefore evident that straighter routes would be impossible to facilitate without significant diversions and longer routes.

2.1.13 The design of the footbridge at Junction 11 would also have been in accordance with the National Design standards contained within Design Manual for Roads and Bridges BD 29/87 - Design Criteria for Footbridges, which was withdrawn in November 2003. It is noted that this design criteria at Paragraph 7.4.1.2 specifies that where a ramp is greater than 1:20 a significant change of direction would be required for safety reasons, see below.

**7.4.1.2 Where the ramp slope is steeper than 1 in 20, for safety reasons there should normally be a significant change of direction ( $30^\circ$  or more) at intermediate landings.** (my emphasis) Successive sloping ramps in one line should only be used where no other arrangement of ramps is possible on the site or where it provides more encouragement to pedestrians to use the footbridge by shortening the walking distance.

2.1.14 The application drawings associated with the footbridges at Junction 11 can be found at Appendix 3 and these identify that the proposed design included gradients in excess of 1:20. The provision of the switch back design at Junction 11 was therefore justified in that instance and in accordance with the design standards at that time.

### River Kennet

2.1.15 The Highways adoption of the bridge and the ramp took place in December 1999 and as such the design of the ramp is likely to have also been in accordance Design Manual for Roads and Bridges BD 29/87 - Design Criteria for Footbridges, as per the Junction 11 scheme. Again, this is a historic connection to a bridge over the River Kennet which requires a significant height to provide a clear route along the river. This can be clearly seen by the image below at Figure 4.

Figure 4 - Kennet Walk Footbridge



2.1.16 The gradients of the ramp to the footbridge can be identified at Appendix 4, which is a drawing illustrating a proposed connection via a ramp to the adjacent developments. This drawing illustrates the gradient as being approximately 1:15 and therefore the switch back design would apply in accordance with Design Manual for Roads and Bridges BD 29/87 - Design Criteria for Footbridges.

2.1.17 Given that the route to Christchurch bridge is to be at a gradient of 1:21 the Highway Authority are of the opinion that the sites listed by the Appellant are neither comparable nor relevant in this instance.

### Assessment of Footbridge Design Standards CD353 against Appeal Scheme

2.1.18 To aid as a comparison in relation to the proposed scheme I reference the current standards contained within Design Manual for Roads and Bridges standards, CD 353 - Design criteria for footbridges, which specifies the criteria to be used for the design of urban or rural footbridges that are intended for use by pedestrians, cyclists and equestrians. This document can be found at Appendix 5, with the appropriate Paragraphs being 5.8 to 5.12.3. In short, these paragraphs state the following:

- Maximum gradient on a bridge or approach ramp shall be no steeper than 1:20 unless special circumstances apply
- Intermediate horizontal landings shall be provided for gradients between 1 in 20 and 1 in 22 (at equal vertical rise intervals of not more than 2.5 metres)
- Where the gradient is steeper than 1 in 20, there should be a significant change in plan alignment at intervals corresponding to a vertical rise of 3.5 metres.; and
- A change in plan alignment may be achieved by either a change in direction of at least 30 degrees or an offset in the horizontal alignment of at least the width of the footway.

2.1.19 The points highlighted above provide clear technical guidance not only on the bridge structure but on the ramps to a footbridge. It is evident when assessing against these design criteria that the Appeal scheme, which is provided at a gradient of 1:21, would not be required to provide any change in alignment as this is only required when a gradient in excess of 1:20 is proposed. The switchback design is therefore not required for safety purposes.

2.1.20 The Appellant has provided no technical justification for why a switch back design would be appropriate and has claimed it is to help reduce cycle speeds and reduce conflict while providing no evidence to corroborate that view. The ramps on either side of Christchurch Bridge are straight and no speeding or conflicts have been identified along these sections of the bridge that would render a switch back design safer or necessary.

## **2.2 Mr Doyle's Alternative Scheme Options - Review**

### **Paragraph 5.5.2**

- 2.2.1** The Appellant has listed several design issues with the Council's alternative scheme options. The Highway Authority have therefore reviewed these claims and comment as follows:
- 2.2.2** Bullet Point No. 1 claims that the design does not provide the shortest or fastest route, irrespective of this the illustrative design options do provide for a shorter and faster route than the Appeal scheme.
- 2.2.3** It is claimed that the design provides a zig-zag arrangement comprising of near 90 degree bends that will enable faster cycling on a shared path with cyclists likely to aim for the straightest path by cutting across the route at each bend and this would increase the risk of higher speed collisions with pedestrians. However, as identified at Section 2.1 above the National Design Standards for footbridges specifies that for safety purposes alignment changes of more than 30 degrees are only required where gradients exceed 1:20. The Appellants claim that the introduction of 90 degree bends on a 1:21 gradient, which is shallower than when standards would necessitate a change in alignment, would result in cyclists cutting corners and causing a risk to pedestrians is therefore in complete contradiction to the National Design Standards. It should also be stressed that the National Design Standards have been consistent on this design feature since the publication of Design Manual for Roads and Bridges BD 29/87 - Design Criteria for Footbridges in September 1988. This includes Paragraph 7.4.1.2 highlighted above (Paragraph 2.1.13). Were the introduction of 90 degree bends a safety risk the inclusion of them would be prohibited within the National Design Standards, this is however not the case and the Standards themselves accept an alignment change of just 30 degrees. An alignment change of 30 degrees is a substantial reduction from that design presented within the Council's alternative designs and therefore it is clearly apparent that no safety risks are posed.
- 2.2.4** It should also be highlighted that a 90 degree bend is currently provided on the southern side of Christchurch Bridge leading east along the Towpath, images of this arrangement can be found at Figures 5 and 6 below. This arrangement and type of movement is what the Council's alternative schemes are replicating and to which the Appellant is claiming would not be safe. However, the Appellant has provided no evidence that demonstrates that there are any conflicts or issues associated with this arrangement and the Council are also unaware of any issues since the bridge was opened in September 2015.

Figure 5 - Image of 90 degree bend on Christchurch Bridge

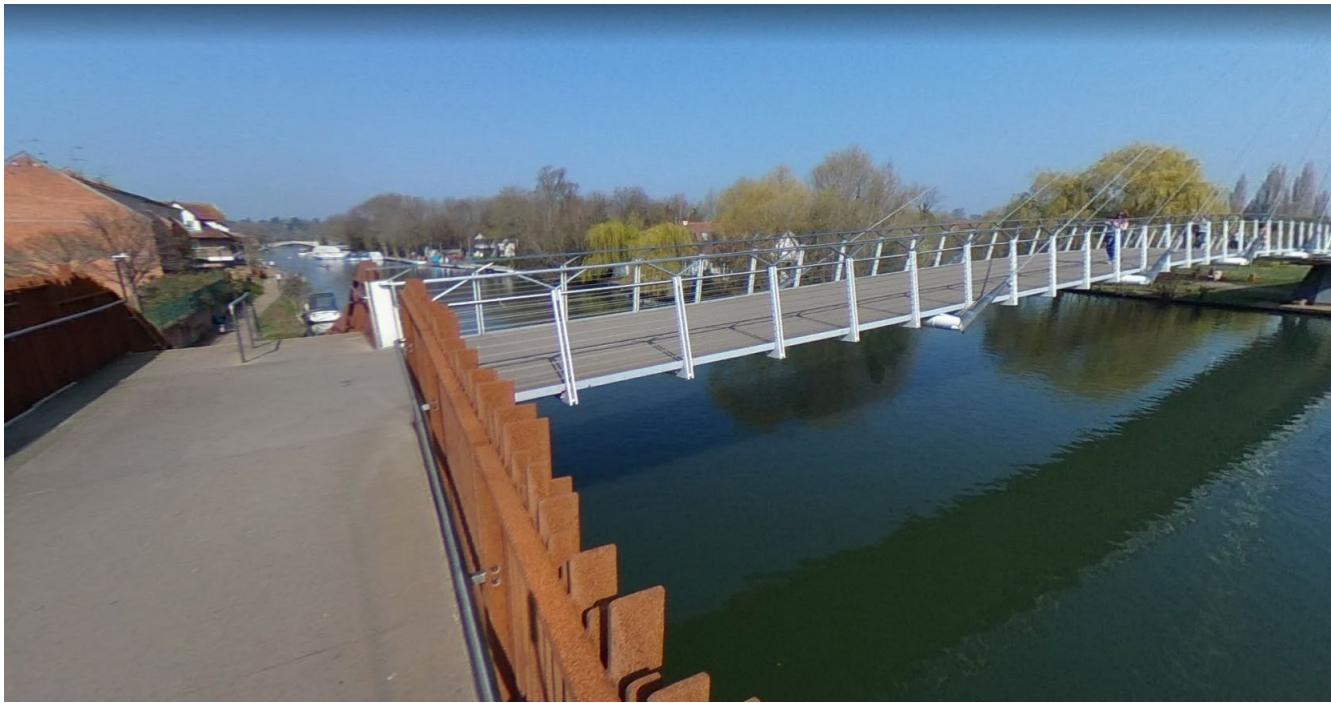


Figure 6 - Aerial image of 90 degree bend on Christchurch Bridge



- 2.2.5 At Bullet Point No.2 it is acknowledged that the café building illustrated on the Council's Alternative scheme layout would obstruct the forward visibility of a cyclist, however this proposed location is indicative only and could be relocated / redesigned to ensure that the forward visibility is not restricted. The remaining space outside of the forward visibility would easily accommodate such a facility should a café be retained as part any scheme and this is evidenced at Appendix A of the Councils Design Rebuttal Proof.
- 2.2.6 Bullet Point No. 3 claims that the two stepped access points illustrated in the Councils alternative scheme lead directly onto the north south link which provides for no widening or additional space for pedestrians to wait resulting in a greater potential for conflict between a pedestrian stepping out into the path of a faster moving cyclist. I would however stress that landings at the top and base of the stairs could be provided within minimal tweaks through design development. Again, this is evidenced at Appendix A of the Councils Design Rebuttal Proof.
- 2.2.7 Bullet Point No. 4 & 5 state that the proposed alternative routes would require the need for guard railing given the level changes along the footway/cycleway as it climbs to Christchurch Bridge. It is further claimed that the Appeal scheme does not require the need for 'obtrusive and restrictive guardrails', however as is evident at Figures 5.2a, 5.2b and 5.2c of the Appellants Transport Proof of Evidence guard railing is required as part of the Appeal scheme.

#### Paragraph 5.5.5

- 2.2.8 The Appellant has referenced that 'Version A' (SK03) of the Councils alternative designs which includes a smaller turning head than that provided as part of the Appeal scheme. It is claimed that the majority of delivery vehicles, even smaller LGVs, would need to overrun onto the pedestrian/cycle route and would find it very difficult to turn around at all without overrunning the parking and landscaping areas. The Appellant has provided tracking at Appendix H of their Transport Proof of Evidence and it is accepted that the LGVs would need to overrun the footway / cycleway but this is accepted by the Highway Authority as this would be in forward gear and where visibility would be available along the footway.
- 2.2.9 It should be stressed that the tracking diagrams included at Appendix H provides no evidence of a vehicle not being able to undertake the manoeuvre and driving over the parking and landscaping as specified. However, the Councils Design Rebuttal Proof deals with this issue at Section 5.5 and provides updated details of suitable on-site turning facilities.

## **2.3 Towpath Connection**

### Design Principles / Cycle Access

#### Paragraph 6.1.2

- 2.3.1 The Appellant claims at that RBC policies do not require the route to the Towpath to be a cycle route, and therefore Paragraph 110 of the NNPF which requires designs to reflect national guidance should only relate to pedestrian route design. However, Local Plan Policy CR11 ii) states that development will help facilitate greater pedestrian and cycle permeability, particularly on the key movement corridors. This Policy therefore requires the facilitating of greater cycle permeability throughout the Opportunity area. In the part of the Area within the appeal site, which includes the towpath, the scheme actually blocks cycle permeability by not providing cycle access. In addition, Paragraph 5.4.6 of the Local Plan is fundamentally clear that the successful development of this area hinges on improved accessibility by public transport, and improved permeability for pedestrians and cyclists.
- 2.3.2 Paragraph 5.4.6 of the Local Plan continues to state that one of the key principles includes removing barriers to access within the centre. Although there are no guarantees that the Towpath will be permitted to allow cycling the development must plan for the future and anticipate that cycling may be permitted so that the development does not create a barrier for cyclists wishing to access the Towpath in the future.
- 2.3.3 Paragraph 110 of the NPPF, to which the Appellant also refers, states that specific applications for development should ensure that appropriate opportunities to promote sustainable transport modes can be - or have been - taken up, and that safe and suitable access to the site can be achieved for all users. In order to facilitate a modal shift away from the private car it is imperative that all routes into and out of sites can facilitate all users, which would include pedestrians and cycles.
- 2.3.4 Providing an array of quality / accessible routes for all modes of travel is essential in promoting alternative modes of transport and encouraging modal shift.

#### Paragraph 6.1.5

- 2.3.5 It is not correct that the provision of a footpath down to the towpath fully enhances public access. Public access should not be seen as providing access solely for pedestrians this must include provision for cyclists also in line with the requirements of Local Plan Policy CR11 and Paragraphs 106 and 110 of the National Planning Policy Framework.

#### Paragraph 6.1.6

- 2.3.6 Although the LCWIP is only proposing designating the future use of the Towpath as a ‘leisure’ route the Appellant is mistaken to rely on this as a reason to fail to provide a cycle route to the Towpath. Point d of Paragraph 106 of the NPPF requires planning policies to provide for attractive and well-designed walking and cycling networks drawing on Local Cycling and Walking Infrastructure Plans. Local Plan Policy TR4 Cycle Routes and Facilities (provided in full at Paragraph 4.4 of the Highway Authorities Statement of Case) states that developments will be expected to make full use of opportunities to improve access for cyclists to, from and within the development and to integrate cycling through the provision of new facilities and that development will not detrimentally affect an identified cycle route. It is continued at Paragraph 4.5.20 that the Cycling Strategy and the development of a Local Cycling and Walking Infrastructure Plan will be useful to help identify which improvements are required. The non-provision of a cycle route through to the Towpath, which has been identified as a potential future cycle route does not comply with this Policy requirement as the development is not making full use of their opportunity to improve access from the development to a potential future cycle route.

#### Assessment of Future Cycling Desire Routes

##### Paragraph 6.2.1

- 2.3.7 The Appellant has claimed that providing a cycle connection between the development site and Towpath would likely lead to increasing conflicts between users at the narrow point on the towpath where the two paths would meet. The Appellant had claimed this as part of the Statement of Case however no evidence has been presented further within the Appellants Proof of Evidence that would corroborate that view. Photographic evidence was provided as part of the Highway Authorities Proof of Evidence (Paragraphs 4.4.18-4.4.20) that identified that any connection would be no worse and ultimately should be better than the multiple connections already along the Towpath, to which there are no reported conflicts that currently occur.
- 2.3.8 Furthermore, two of the proposed comparison sites presented by the Appellant namely the A33 and Junction 11 sites both include 90 degree bends at which two cycle routes join, the A33 scheme in particular is adjacent to a Towpath and provides particular context. These can be viewed at Appendix 1 and 2 respectively, with Figure 7 below providing an image of where the A33 switchback and Towpath meet. It should be recorded that the Appellant has identified no existing incidents at these locations and none are known to the Council. Any connection for cyclists to the Towpath is therefore highly unlikely to create any detrimental impacts in relation to Highway Safety.

Figure 7 - Image of where the A33 switchback and Towpath meet



#### Paragraph 6.2.2

- 2.3.9 The Appellant has claimed that a cycle route to the Towpath would be no more direct, quicker or more convenient than the existing cycle links going east or west from the station area. In relation to routes to the west many cyclists travelling along a traffic free and landscaped route through the development would be far more appealing than using the existing routes along Lynmouth Road, De Montfort Road and Brighams Road, as can be seen at Figures 3, 4 and 5 of the Highway Authorities Proof of Evidence. Given that there is no material difference in relation to distance and time the traffic free pleasant landscaped environment through the site would make this route the desired route to / from the west.
- 2.3.10 It is accepted that any route through the Appeal site from the Station to the east would result in an increased distance but again this should not restrict access through the site for cyclists. The Appellant has provided an assessment of routes to the east from the station at figure 6.1, however this only includes routes commencing at the station. This would not take account of movements associated with residents of the development itself or other developments within close proximity to the Appeal site. In particular, the Aviva and Royal Mail sites both of which are currently with the Council for consideration.
- 2.3.11 Further to this the route assessment illustrated at Figure 6.1 of the Appellants Proof of Evidence does not take account that should development come forward on the Aviva site (outline application currently under determination), located between the Appeal site and Reading Station, then a direct route would be provided between the Station and the proposed crossing onto Vastern Road. This direct route is also required as part of Policy CR11 and would reduce the distance required to travel to approximately 500m.
- 2.3.12 It should also be stressed that the route through the Thames Water site known as Clearwater Court, identified at Figure 6.1 is not a designated cycle route and is not included within the LCWIP as a future route. This provides a pedestrian route only across private land and cannot be guaranteed as a future cycle route and as such should not be included within any assessment of cycle routes.

#### Paragraph 6.2.6

2.3.13 It has been stated that at that the site will in fact provide cycle access to the Towpath to the east, should a cyclist need to use this route, by going up the switchback ramp and then down the existing Christchurch Bridge ramp on the southern side of the River. However, should a cyclist wish to undertake this route it's length from the site entrance onto Vastern Road to the base of the ramp along the river would be 224m. Were a cycle route provided directly to the Towpath this would not only reduce the distance required to travel, this route being just 170m, it would also remove the need to climb up to the bridge only to have to come back down to the Towpath level. This would therefore make a route via the Towpath more desirable for residents of the development and those of the immediate surrounding area.

#### Gradient Review

##### Paragraph 6.3.1

2.3.14 The Highway Authority accepts that DfT document Inclusive Mobility has no legal status and only provides guidelines, but those guidelines should be adhered to as much as possible unless extenuating circumstances apply. This is to ensure that a safe and suitable access for all users is provided in accordance with the Paragraph 110 of the NPPF and public access to the Thames in line with Policy CR11g is as inclusive as possible and should not discriminate against those with disabilities.

##### Paragraph 6.3.4

2.3.15 The Appellant has stressed that the proposed scheme has been designed in accordance with Section 8.4 of DfT document Inclusive Mobility that addresses the design of ramps. However, Section 3.2 of Inclusive Mobility detailing gradients does state that 'steeper gradients than these (5% or 1:20) can be managed by some wheelchair users, but only over very short distances (1000mm or less), for example on a ramp between a bus entrance and the pavement. Therefore, irrespective of whether the scheme is designed in accordance with ramps or not Inclusive Mobility provides clear guidance that a steeper gradient than 1:20 will cause difficulty to some people and will not be fully accessible.

2.3.16 It should also be highlighted that the Appellant has failed to identify that the Inclusive Mobility standards relating to ramps is obtained from BS 8300 and the Inclusive Mobility document explicitly states the following:

*BS 8300 states that a ramped approach should have the lowest practical gradient and should be within the limits shown in the table below.*

2.3.17 It is important to note that the scheme has not been designed to incorporate the lowest practical gradient as defined in Figure 8 below. The Appellant themselves have confirmed this at Appendix F of the Transport Proof of Evidence, given that a scheme including a 1:21 gradient has been illustrated.

**Figure 8 - Inclusive Mobility Ramp Gradients**

Going of a flight	Maximum gradient	Maximum rise
Not exceeding 2m	1:12	167mm
Not exceeding 5m	1:15	333mm
Not exceeding 10m	1:20	500mm

2.3.18 Given that the gradients presented have been obtained from BS 8300 it is important that the latest context to these standards is now reviewed and these are found within BS 8300-1:2018 Design of an accessible and inclusive built environment Part 1: External environment – Code of practice. In this regard I note the following sections relating to gradients and ramps, with the full document provided at Appendix 6.

#### 8.1.4 Gradients

*An access route should either be level along its length or (where the topography of the land prevents this) should be gently sloping or incorporate a ramp or ramps in accordance with 9.2. Where the change in level is sufficient to avoid a single step, a stepped approach should also be provided (see 9.1).*

*NOTE 1 It is assumed that a gradient of 1:60 or less steep is level; steeper than 1:60 (but less steep than 1:20) is gently sloping; and 1:20 or steeper is a ramp.*

#### 9.2 Ramps

##### COMMENTARY ON 9.2

*If a change in level along pedestrian routes is unavoidable, it is necessary to provide gently sloping or ramped options. However, as some people with an ambulant mobility impairment have difficulty using ramps, it is undesirable for a ramp to be the only route. (my emphasis)*

*The key issues in the design of gently sloping or ramped access routes are the gradients of flights and the distances between landings. Where the gradient is too steep or an individual flight too long, a wheelchair user might not have sufficient strength to use the slope. In the same situation, a companion who is pushing a wheelchair user is also likely to encounter the same difficulties. If the gradient is too steep, there is also the danger of a wheelchair user falling out forwards when going downhill, or of a wheelchair tipping over backwards when going uphill. Control and braking are also difficult on steep gradients. Excessive cross-fall gradients present further difficulties when manoeuvring on ramps.*

##### 9.2.1 General

*The relative levels of the accessible entrance to a building and the entry point to the site (as well as access routes across the site) should be designed to eliminate, as far as is practicable, the need for ramped access (see 8.1.4) (my emphasis). Where the change in level is such that a portion of the access route needs to have a gradient of 1:20 or steeper, the access should be ramped.*

*NOTE 1 Where the change in level is less than 300 mm, a ramp is the only viable means of access, as it avoids the need for a single step (see 9.1.3).*

## 9.2.2 Gradient of a ramp

**A ramp should have the lowest practicable gradient within the range 1:20 to 1:12 and the maximum corresponding length between landings. (my emphasis)**

2.3.19 The guidance stipulated above provides a clear steer that there is a hierarchy in relation to the gradients provided i.e. level (1:60 or less), gently sloping (between 1:60 and 1:21) and a ramp (1:20 or steeper) with the guidance stating that ramps should be avoided and the lowest practical gradient provided. The proposed scheme does not comply with these design guidelines given that that a lowest practical gradient has not been provided. With Inclusive Mobility (Section 3.2) also stating that only some wheelchair users can manage gradients in excess of 1:20 and only over very short distances (1m or less).

### Paragraph 6.3.8

2.3.20 As highlighted above the Appellant has designed a route to the towpath that provides a 1:21 gradient, found at Appendix F of the Appellants Transport Proof of Evidence. This design has been discounted by the Appellant who has stated that in their opinion, '*a series of three shorter ramp sections as proposed, at 1:15 with resting places every 5.0m, is a more appropriate design*'. As explained above, this approach is in conflict with National Guidance contained within Inclusive Mobility and BS 8300-1:2018, which as stated above requires ramps to be avoided and the lowest practical gradient provided.

2.3.21 It is accepted that a gradient of 1:21 would extend further south into the site and encroach into the Coal Drop Building entrance area, as illustrated in Appendix F. However, this encroachment into the entrance would only extend a distance of 2m and would still allow for a level landing at the building entrance. Also as identified above within standards contained within BS 8300-1:2018 the 1:21 gradient is not constituted as a ramp but is described as gently sloping. Any additional length of a 1:21 gently sloping gradient would not be to any disbenefit to residents residing in the Coal Drop Building as the encroachment into the entrance area would not require the inclusion of a ramp. The 1:21 gently sloping gradient is also in excess of the preferred 1:20 gradient specified within Inclusive Mobility.

2.3.22 It is essential that developments provide pedestrian areas across sites that are as accessible as possible including the lowest possible gradients to facilitate the unimpeded movement of pedestrians regardless of their ability.

## 3.0 Summary of Rebuttal Evidence

### North-South Link Rationale

- 3.1 The Appellant has argued that the proposed route through the site is significantly faster and more direct than the existing cycle route via Norman Place, which is accepted. However, the Local Plan Policies do not request a route that is faster than an alternative it is demanding a direct route through the site. This is something that is not provided to the best of the Appellants ability given that the Councils alternative schemes present evidence that shorter more direct routes are feasible.
- 3.2 The Appellant has provided no evidence to suggest that cycling on grass would generate a similar cycle speed than that cycling along a 1:21 gradient and how the proposed scheme would compare with the alternative designs presented by the Council. Irrespective of this the proposed switchback arrangement creates a longer route that would take longer to cycle than the alternative layouts presented by the Council and as such would not be the most direct route through the site.
- 3.3 The proposed route would score well in the LCWIPs methodology when assessing directness compared in isolation to the alternative on carriageway route given that the road network has to undertake a significantly longer route. However, as presented at Paragraphs 2.1.1, 2.1.2 and Table 1 of this Rebuttal the Councils alternative schemes would provide for an improved score than that achieved by the Appellants proposal and ultimately would be preferable.
- 3.4 Switchback ramps are designed to move people from one level to another and there are a number of examples across Reading that also form part of the existing cycle network but these examples are not comparable to the Appeal site as the constraints surrounding them significantly differ. It has also been proved by way of National Design Standards for footbridges (CD353) that the route to Christchurch Bridge, which includes a gradient of 1:21, would not necessitate the need for a switchback design to reduce the speed of cyclists or improve safety, as is claimed by the Appellant. This therefore cannot be used as an argument for the inclusion of the switch back arrangement in the scheme.
- 3.5 The Appellant has also presented no Design Standards within their Transport Proof of Evidence that would substantiate the inclusion of the switchback arrangement.

### Mr Doyle's Alternative n-s Link Design

- 3.6 The Appellant provides several critique points to the Councils alternative design to which I comment as follows:

- The Councils alternative scheme presents a faster route through the site than that of the Appeal scheme and as a result the Appeal scheme does not provide for the most direct route through the site. The Appellant criticises the zig-zag arrangement claiming that it would encourage faster cycling and increase a risk of collisions. However, the Appellants opinion on this is in conflict with National Design Standards contained within Design Manual for Roads and Bridges standards, CD 353 - Design criteria for footbridges as detailed within Paragraphs 2.1.18-2.1.20 above.
- The Councils alternative ramp designs did include the provision of the café building which would reduce levels of forward visibility for cyclists however, this has been addressed and a revised proposal is included within the Council's Design Rebuttal Proof so that visibility is maintained.
- The Council's alternative layout ensures that the base of the ramp to Christchurch Bridge ties into the same ground level and at the same location than the Appeal scheme, as evidenced at Appendix A of the Councils Design Rebuttal Proof. This therefore allows for a 1:21 gradient to the Towpath to be provided in the same way as the Appellant has illustrated at Appendix F within their Transport Proof of Evidence or by way of the latest layout presented by the Council which again can be found at Appendix A of the Councils Design Rebuttal Proof.

### Towpath Connection

- 3.7 Local Plan Policies CR11 and TR4 explicitly state that improvements to cycle routes are required and improvements within the LCWIP should be taken into account. The principles of this are also included within NPPF paragraph 106. Given that the Towpath is identified as a potential cycle route the scheme must incorporate a cycle route through to it in order to facilitate improved access for the public including residents of the development.
- 3.8 The Appeal scheme has been developed utilising the maximum gradients for a pedestrian ramp but it is fundamentally incorrect to claim that this is as required by Inclusive Mobility guidance. Inclusive Mobility is clear that a ramped approach should have the lowest practical gradient. In addition, BS 8300-1:2018 Design of an accessible and inclusive built environment Part 1: External environment – Code of practice, which feeds into Inclusive Mobility, states that ‘the relative levels of the accessible entrance to a building and the entry point to the site (as well as access routes across the site) should be designed to eliminate, as far as is practicable, the need for ramped access’. The Appellant has illustrated that a lower gradient can be achieved and it has been proved that this is to no disbenefit to residents of the development or the wider public and therefore the scheme is in conflict with this guidance.
- 3.9 No evidence has been presented that cycle access to the Towpath would result in conflict where the two paths meet and the Highway Authority have provided numerous locations within the Proof of Evidence where this currently exists and are unaware of any existing problems or conflicts.

- 3.10 A cycle link from the site down to the towpath going eastwards may not be the desired cycle route for some depending on their journey origin but this may form a desire line for others, including developments currently under consideration and residents of the Appeal scheme. It has been proven that the route via the Towpath would be shorter and remove the need to go up to Christchurch Bridge only to come back down the ramp alongside the River making this a more desired route than utilising the switchback. It would therefore still provide an important role in facilitating the movement of cyclists.
- 3.11 Policy CR11g does require enhanced public access along and to the River Thames but the Highway Authority do not agree that this should be restricted to just pedestrians. Public Access is only specifying that the public should be able to gain access this is not identifying a mode of how they access the river and as such cyclists should not be restricted access should the Towpath facilitate cycling in the future.
- 3.12 In addition it is Policy CR11 ii) that states that the development should facilitate greater pedestrian and cycle permeability, however by not providing access for cyclists to the Towpath the scheme is in fact blocking permeability.