

The Old Power Station, Design Addendum

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Introduction

This document has been produced in response to the comments received on 22 October 2020 from Darren Cook, Transport and Development Control Manager, and Mark Worringham, Area Planning Team Leader.

The purpose of this document is to review and respond to comments raised in relation to the design and access through the site, connecting through to Christchurch Bridge.

Part 1 of the document assesses the main assertions from the comments received, demonstrating that the suggested approaches are not achievable given the constraints of the site.

Part 2 of the document illustrates how we have worked with the site constraints to achieve the principles of the RSAF in providing a direct route between the Station and Christchurch Bridge.

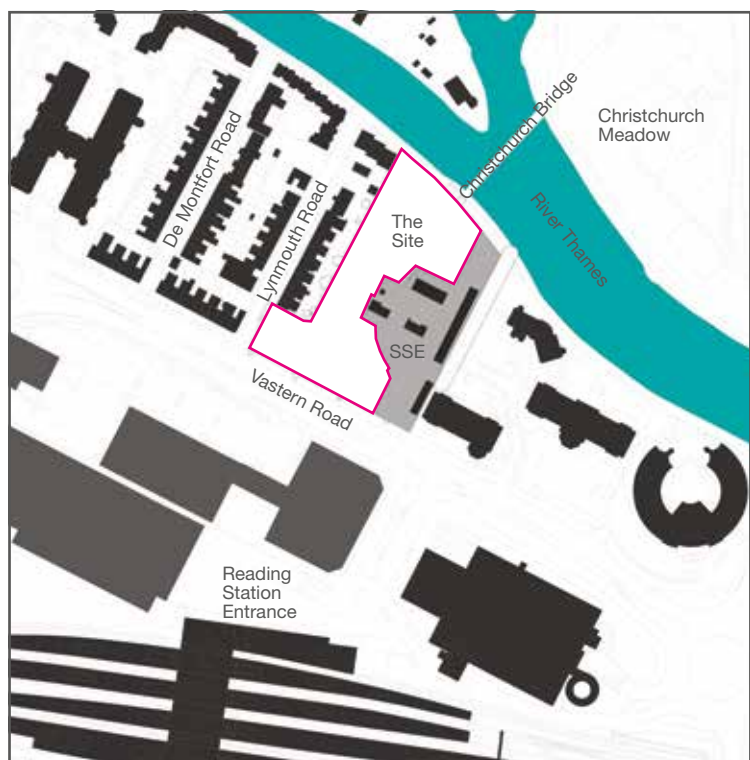
Part 3 of the document compares the proposals to plans from the RSAF document, and in response to direct comments from the Area Planning Team Leader.

Part 4 examines the questions over the widths and gradients of the foot / cycleway and the route which this takes through the site.

Site Location Plan

The adjacent plan shows the site in context, stripped back to show the “fixed” constraints - i.e. built form, land ownership, and the key features such as the Station, Christchurch Bridge and Meadow.

For the purpose of this document, all plans contained are drawn to the same scale. Where illustrative plans from other documents have been included, these have been scaled to match this plan to ensure consistency in approach.



Part 1

Demonstrating Unachievable Route Options

Figure 1.1
Existing Access Points

The three principle access points consist of the North Entrance to Reading Station, the Station Underpass and the crossing over the River Thames via Christchurch Bridge.

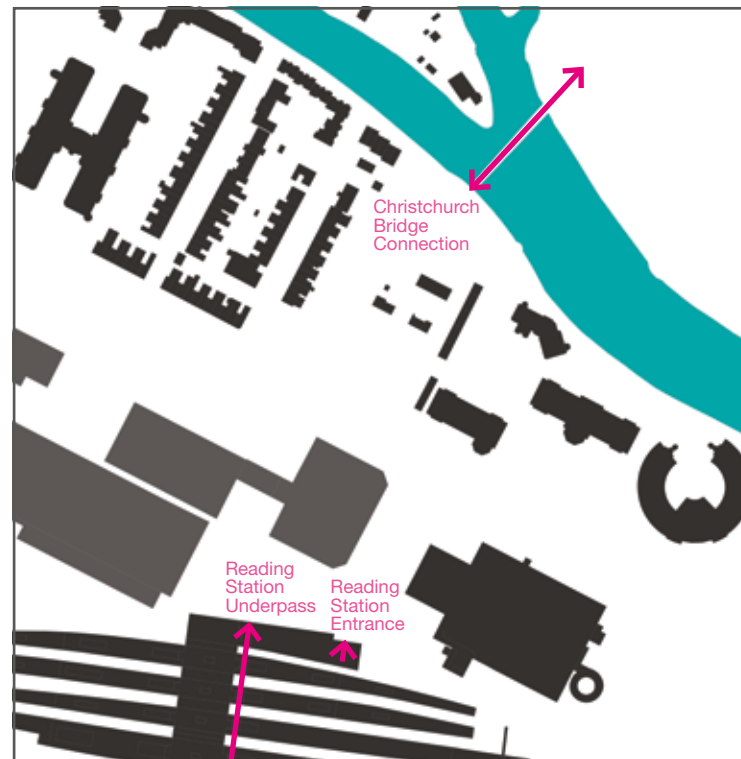


Figure 1.2
Line of Sight from the Station to Christchurch Bridge

Extrapolating a line of sight from each of the access points, through to the landing of the Bridge, demonstrates that neither route would be achievable owing to the retention of the SSE equipment.

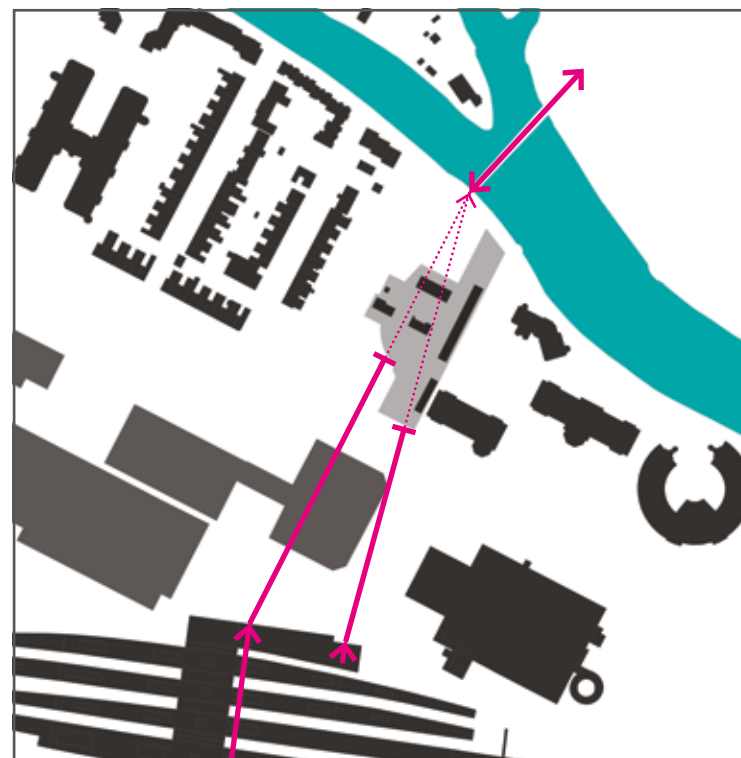


Figure 1.3
Line of Sight from Christchurch Bridge to Vastern Road

As demonstrated in Figure 1.2, a line-of-sight route is not achievable between the Station and the Bridge.

An alternative approach can also be demonstrated taking a line of sight from the Bridge towards Vastern Road.

As with figure 1.2, this straight route is not possible due to the retained SSE equipment.

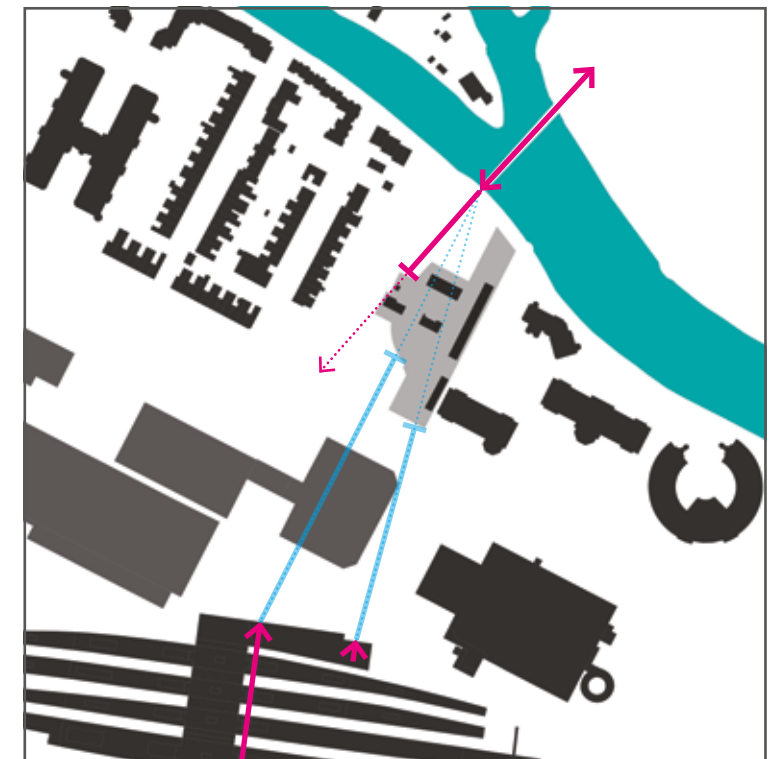
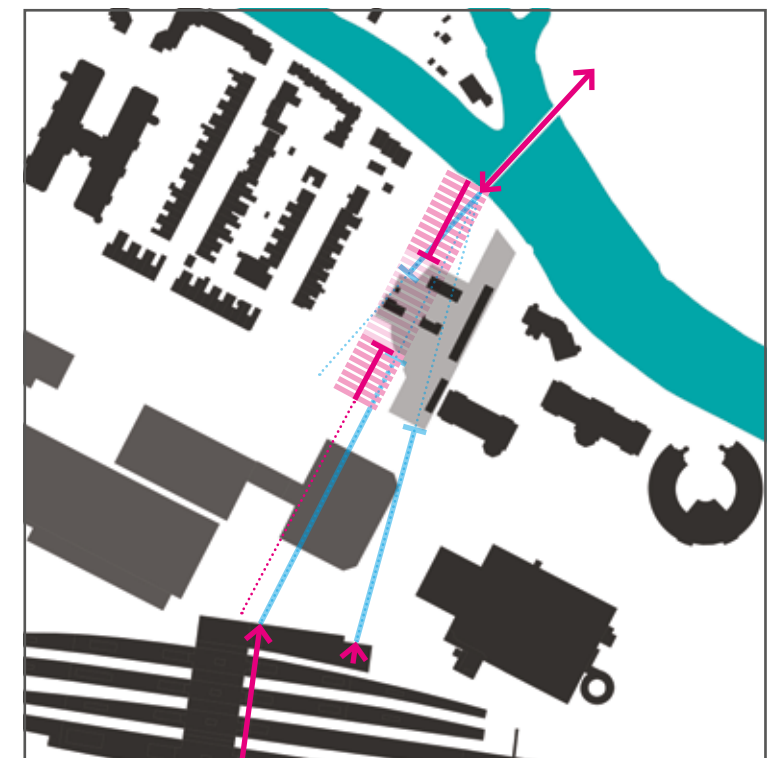


Figure 1.4
Creating a Linear Corridor to the Bridge

Taking in to account the diagrams located within the RSAF, a linear corridor was proposed connecting the Bridge to Vastern Road.

As with the previous proposals, this option is also unachievable due to the retained SSE equipment.

It is also worth noting that the provision of such corridor through the site would not align with the two station entrances in any case, and as such a cranked or arched route would still be required.



Part 2

Creating a Direct Route Between the Station and Bridge

Figure 1.5
Providing a Screen to the
SSE Equipment

Figures 1.1 to 1.4 show that a route extending from the Bridge, and routes in line-of-sight between the Bridge and Station, are not possible with the retained SSE equipment.

Before developing this further, it is also worth noting the visual, noise and safety requirements to the boundary of the equipment, which would need to wrap around the main elements to a height of 3m. This boundary treatment can consist of either a wall or building(s) but a 2m buffer to this boundary is required in any event, meaning the line would need to be offset.

All of this also needs to be read alongside the narrowing of the site at the centre.

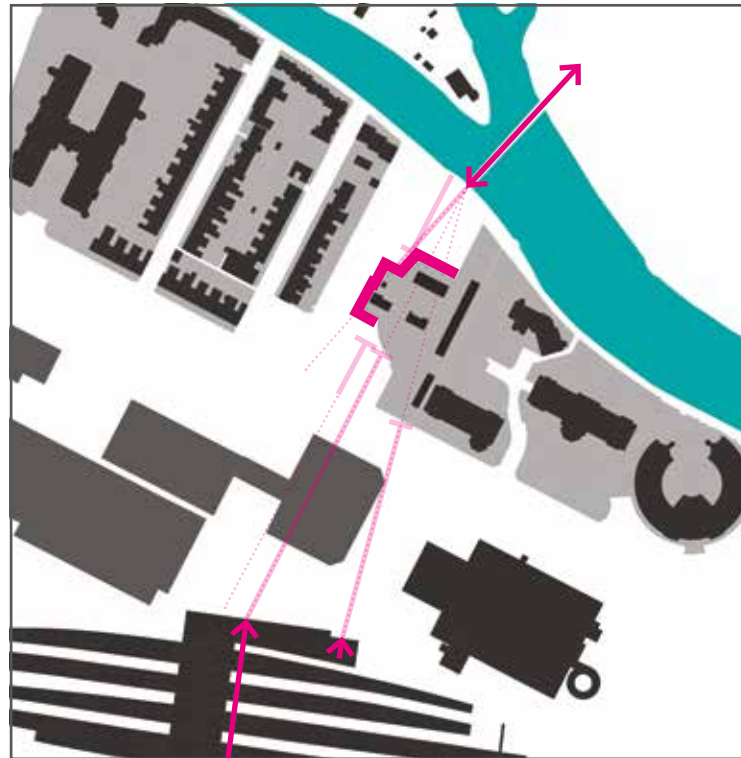


Figure 1.6
Creating an Arched Corridor
between the Station and Bridge

Taking in to consideration all of the above constraints, the most direct route between the Bridge and Station would be a gently curved route which could widen on the approaches to the Bridge to open up views to the Meadow and River Thames, also providing some public amenity space at this point as envisaged within the RSAF.

A similar approach could be taken in the detailed design of the parcels to the south of Vastern Road on the approach to the Station.

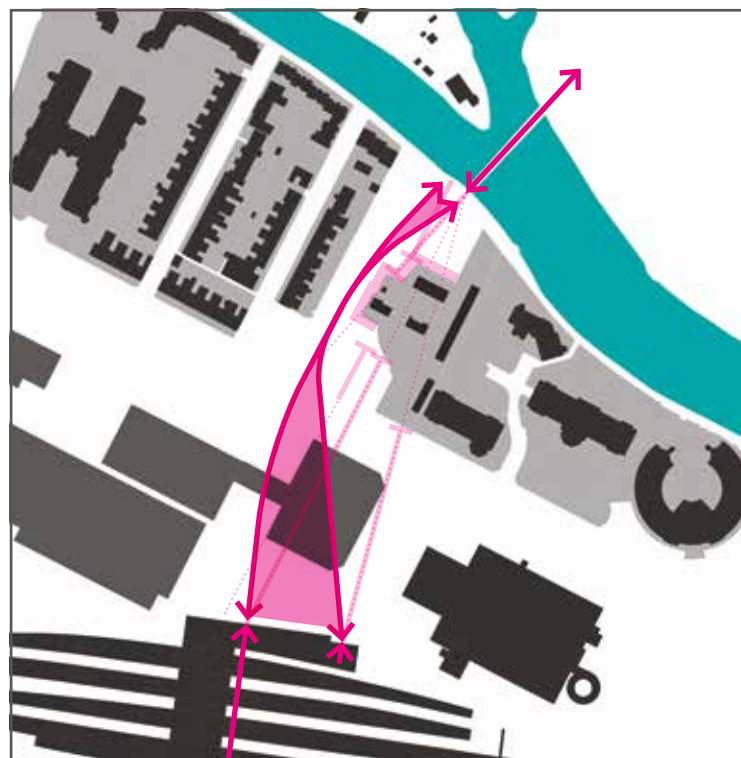


Figure 1.7
Split Routes to the
Bridge and Towpath

The principles of the arched route in figure 1.6 allow for a slightly opened out route on to Vastern Road, allowing for routes either to the Station underpass or to the Station entrance.

Both of these routes will benefit from the proposed widening, providing public amenity space at the Station and on to the River.

The fanning out towards the River Thames also allows for one route to the Bridge, as well as a secondary route dropping down to the River Thames Towpath.

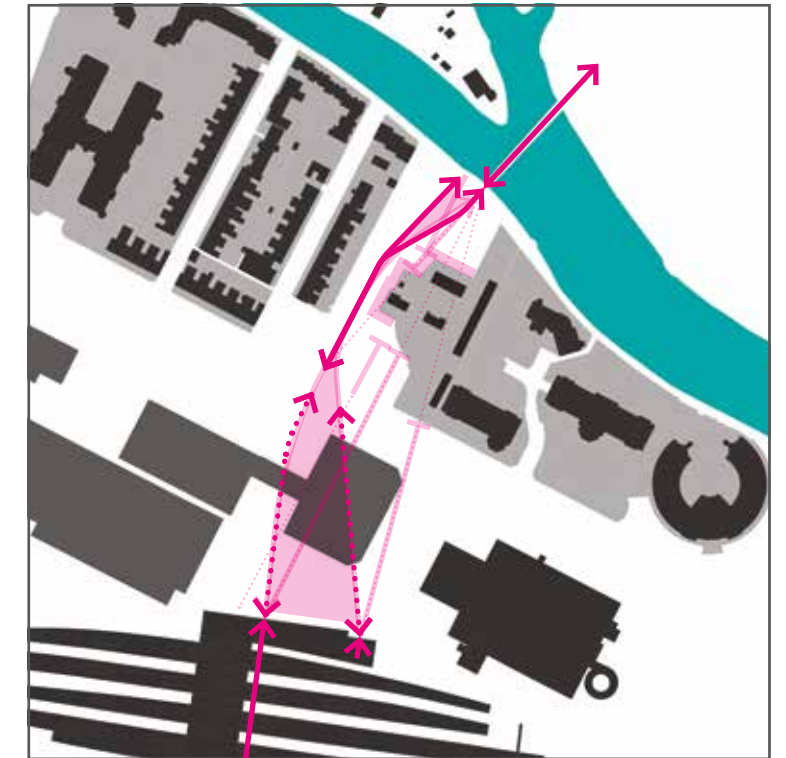
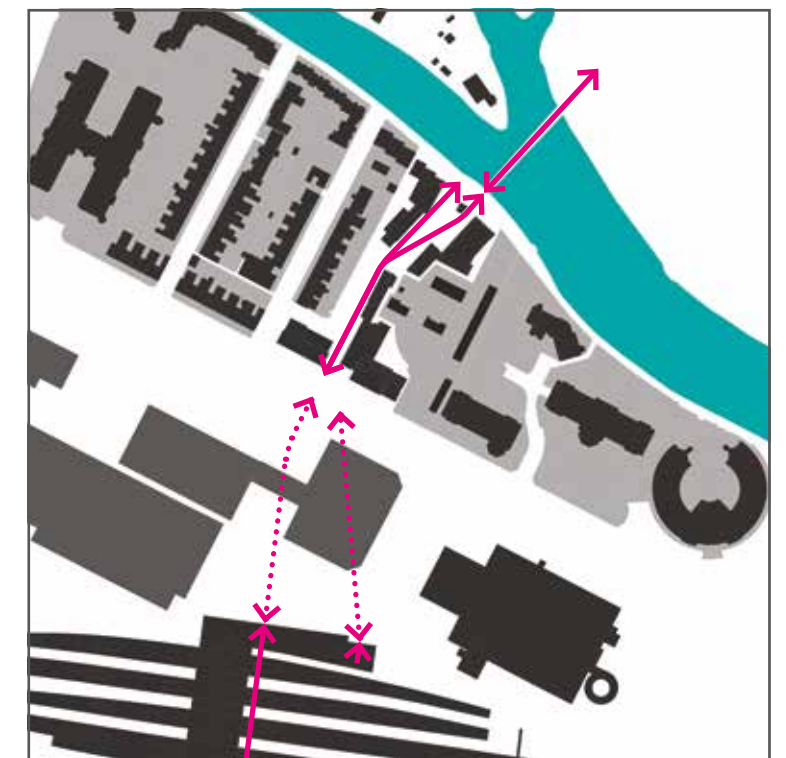


Figure 1.8
Using Buildings to Define
the Route

With the route formed through a rational evolution and evaluation of the constraints and ambitions for this site, the buildings clearly align to provide positive frontage, natural overlooking and surveillance, and a well considered piece of urban design.



Part 3

Assessing the Route Against the RSAF and Policy Comments

Figure 1.9
Comparing Against
RSAF Plan 4.1

Planning Policy RC1, and the accompanying Illustrative Strategy Plan contained in RSAF Figure 4.1, illustrate that a route should be formed between the Station and Bridge.

As seen on this illustrative plan, the route to the bridge was not necessarily envisaged to be straight - this plan shows a curved route connecting the two points.

This follows the same strategy as our scheme (see figure 1.6 above).

(Note, the grey overlay of the SSE site demonstrates the illustrative route is not possible in this exact location).

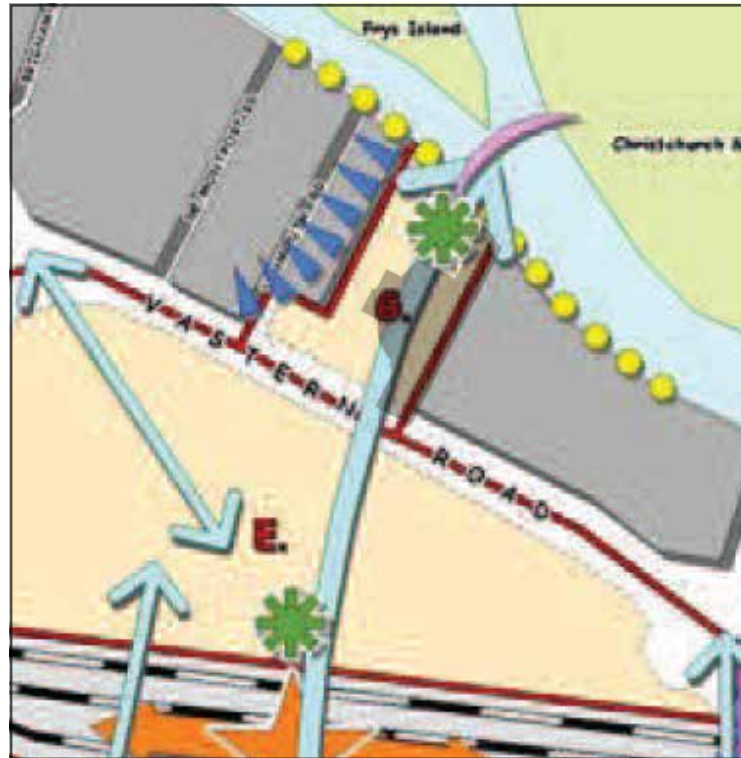


Figure 1.10
Comparing Against
RSAF Plan 11.11

RSAF Figure 11.11 shows the proposed cycleway infrastructure (red dashed lines) and how they would connect to the current infrastructure.

This plan demonstrates that a linear route is illustrated, but with two deflections to the route as it approaches the Bridge (highlighted by the pink circles), so not a "straight" route.

It is also worth noting on this plan, that the route as suggested would not be possible with the retained SSE equipment, and simply moving the route wider to the west would render the resultant site unviable and as such no such connection could come forward.



Figure 1.11
Reduction in Development

Of the feedback given to date, it was suggested within the response from Mark Worringham that the "main problem" with the directness is "the presence of the 'Goods Office' plot" and that "the extent of the Goods Warehouse also accentuates this issue".

As demonstrated within this figure, the loss of the Goods Office, and reduction of the Goods Warehouse buildings still result in a curve to the route and very little change to its connection to Vastern Road, perhaps only moving the route by ca. 3m.

This would also result in a loss of 20-21 dwellings.

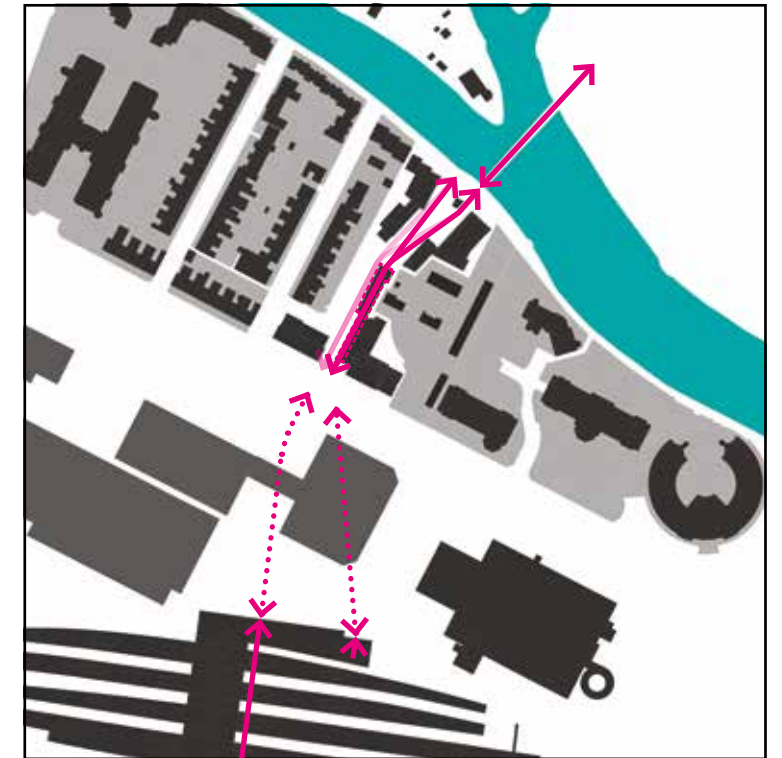
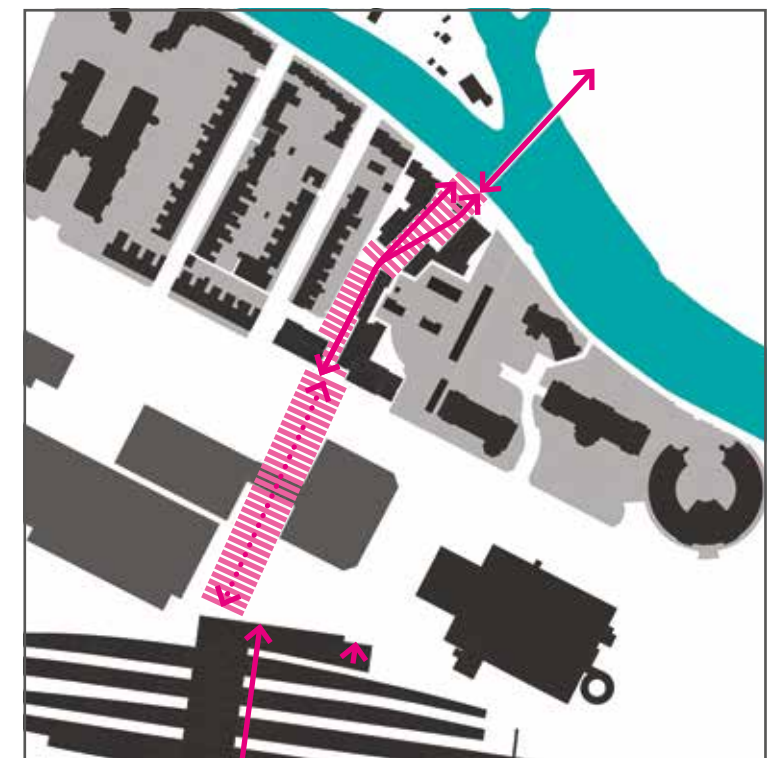


Figure 1.12
Maintaining a Route to the
Station and Bridge

The quality and width of the route has been questioned within the site, referencing pedestrianised town centre streets of 4m wide with Chain Street being only 2.7m wide at the approach.

Our proposal is a much wider street than the ones referenced, being 15-16m wide through the middle of the site, with a local narrowing to 9m towards Vastern Road, but opening out to 25m+ towards the River Thames.

The proposed foot / cycleway within these "streets" varies, but is no less than 3m wide on the route to and from the Bridge, in accordance with LTN 1/20 July 2020.



Part 4.1

Assessing Gradients and Widths

Figure 1.13
Submitted Scheme

In the correspondence received on 22 October 2020, the widths of the proposed foot / cycleway through the site have been questioned and suggested that they are not wide enough.

On the main route to and from the Bridge, as noted in figure 1.12 above, the foot / cycleway as proposed through the scheme is 3m in width as a minimum, increasing to 4m to the connection on to Christchurch Bridge and on changes in direction.

However, it should be noted that the widths of the streets within which the route sits is generally 15m wide, increasing to over 25m towards the River Thames. This route is no greater than 1:21, and as such the width and gradient is in accordance with the DfT guidance, as well as the requirements contained within CD195 Rev.1 - Cycle Route Design. It should also be noted that pre-application advice received 7 October 2019, and 12 December 2019 contained confirmation that the foot / cycleway route to the Bridge would be acceptable at 3m in width.

The second point regarding widths is in relation to the approach and gradient connecting to the Thames Towpath, stating that our route is too narrow (2m wide minimum) and gradient too steep (1:15 maximum).

Despite having been discussed in the Councils Traffic Management Sub-Committee on 14 June 2017, and given approval to apply to the Secretary of State for the

conversion of the towpath to a foot / cycleway, this does not appear to have materialised as yet, although we are advised it is under review / consultation at present. Within the objections, and Officers responses, it was accepted that the provision of a foot / cycleway of a reduced width was better than none, and that in accepting the Towpath along this stretch is only 2m wide (i.e. the same as our link to it) that the DfT documentation was guidance only (see paras 4.7-4.8 of the committee report).

It should be noted that gradients and subsequent landings on the Towpath route have been designed in accordance with Building Regulations.

As such, we maintain that this access is a benefit to the site, and is proposed to be in keeping with the Councils own advice on the towpath itself.

In summary;

- the foot / cycleway is designed to deliver a direct route to and from Christchurch Bridge, taking in to consideration site constraints, and at a width accepted during pre-application advice stage, the connection to the Towpath is at the same width as the towpath itself, with gradients in accordance with Building Regulations,
- high quality tree planting and other soft landscaping follow the route through the site,
- dwellings face the route throughout, providing natural surveillance and overlooking.

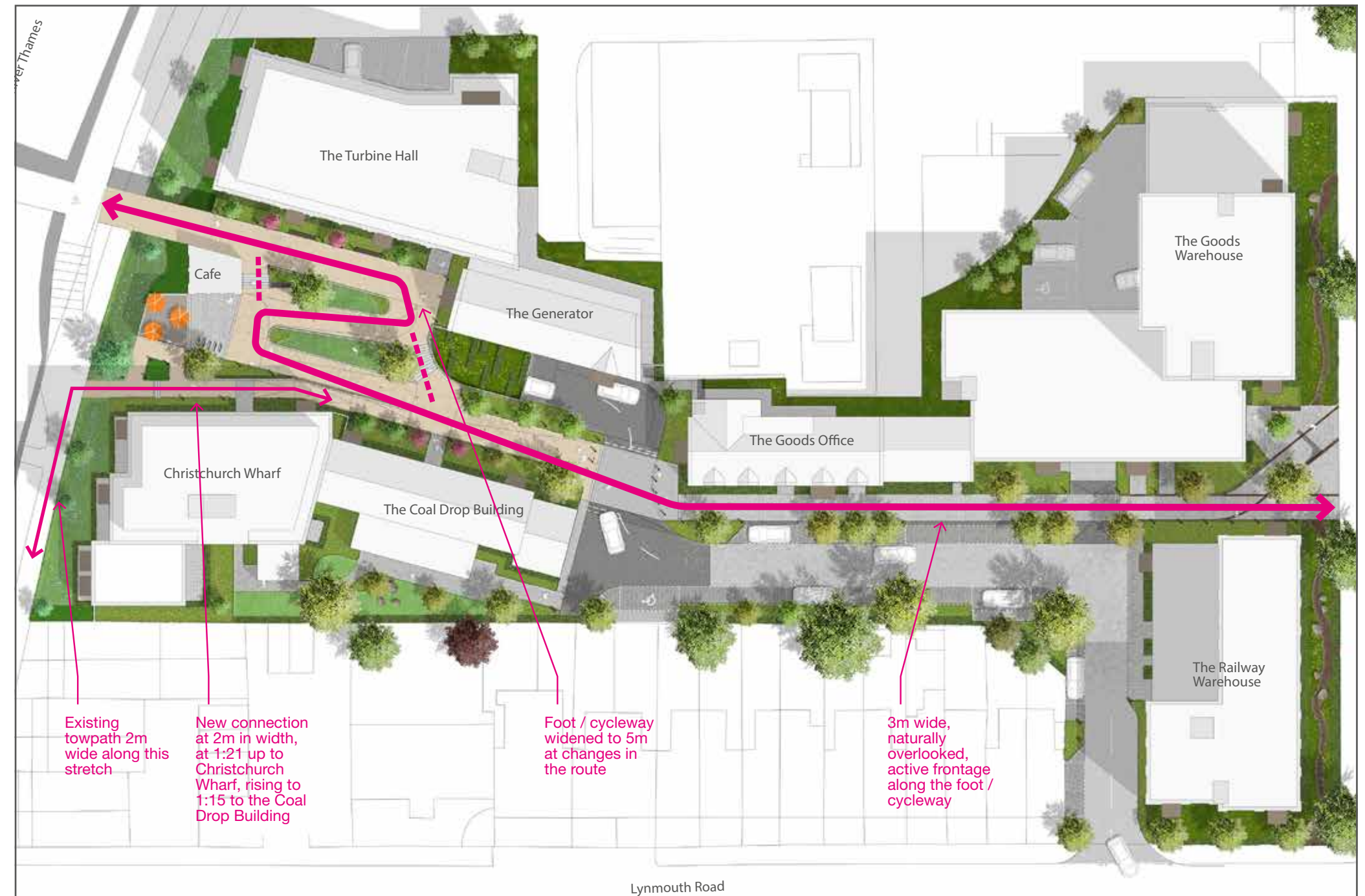


Figure 1.14
Alternate Route Option 1 –
Descend from Bridge

Finally, to address the comments in relation to exploring a straighter route, as demonstrated on the previous figures this is not achievable due to the retention of the SSE equipment.

However, in order to assess the impact on the development an illustrative scheme is set out below which removes the “switchbacks”. For the purpose of this diagram, it is assumed that the response in figure 1.13 is accepted in relation to the width of the ramp to the towpath.

This proposal would see a single ramp from the bridge level, down towards the vehicular crossing point in to the northern undercroft parking area. The ramp would be 3m wide, increasing to 3.7m in width for the second part in order to allow fire appliance access to the Turbine Hall.

As this ramp would then meet the ramp from the Towpath further into the site, the Towpath route would also need to increase to 3.7m in width in part to allow fire appliance access to Christchurch Wharf.

Between the Generator and Coal Drop Buildings, this would see three hard surfaced ramps all at different angles alongside each other, increasing the extent of hardstanding to 13.5m in width (leaving only 1.5m for soft landscaping). This would leave the occupants of Christchurch Wharf and the Coal Drop Building facing out on to hardstanding and retaining walls of up to 2.8m in height (only ca. 2.5m from their windows), with

little scope to soften this with planting.

The extent of raised area would extend a further 31m south from its current position. This would require the road, crossing and turning area to be raised by 600-800mm, resulting in a loadbearing carriageway against the gardens of the properties along Lynmouth Road, and both the Coal Drop Building and Goods Office would need to be raised to the same amount in order to access the properties and refuse stores. We would also see a loss to the parking undercroft to the Turbine Hall due to the increase ramp.

In summary, removing the gentle bends to provide a “straighter” route impacts the proposals as follows;

- as the ramp is straightened, the ramp would then extend further towards Vastern Road,
- the carriageway and crossing would raise by 700mm impacting on the relationship with Lynmouth Road gardens, as well as requiring the Coal Drop Building and Goods Office to be raised by the same amount,
- the direct ramp would result in the loss of the Cafe, viewing deck, and usable soft landscaped areas,
- the point at which the Towpath connection meets the Bridge route would also move further south, resulting in little to no soft landscape between the Coal Drop Building and Generator
- straight ramp enables and encourages higher cycling speeds creating conflict.

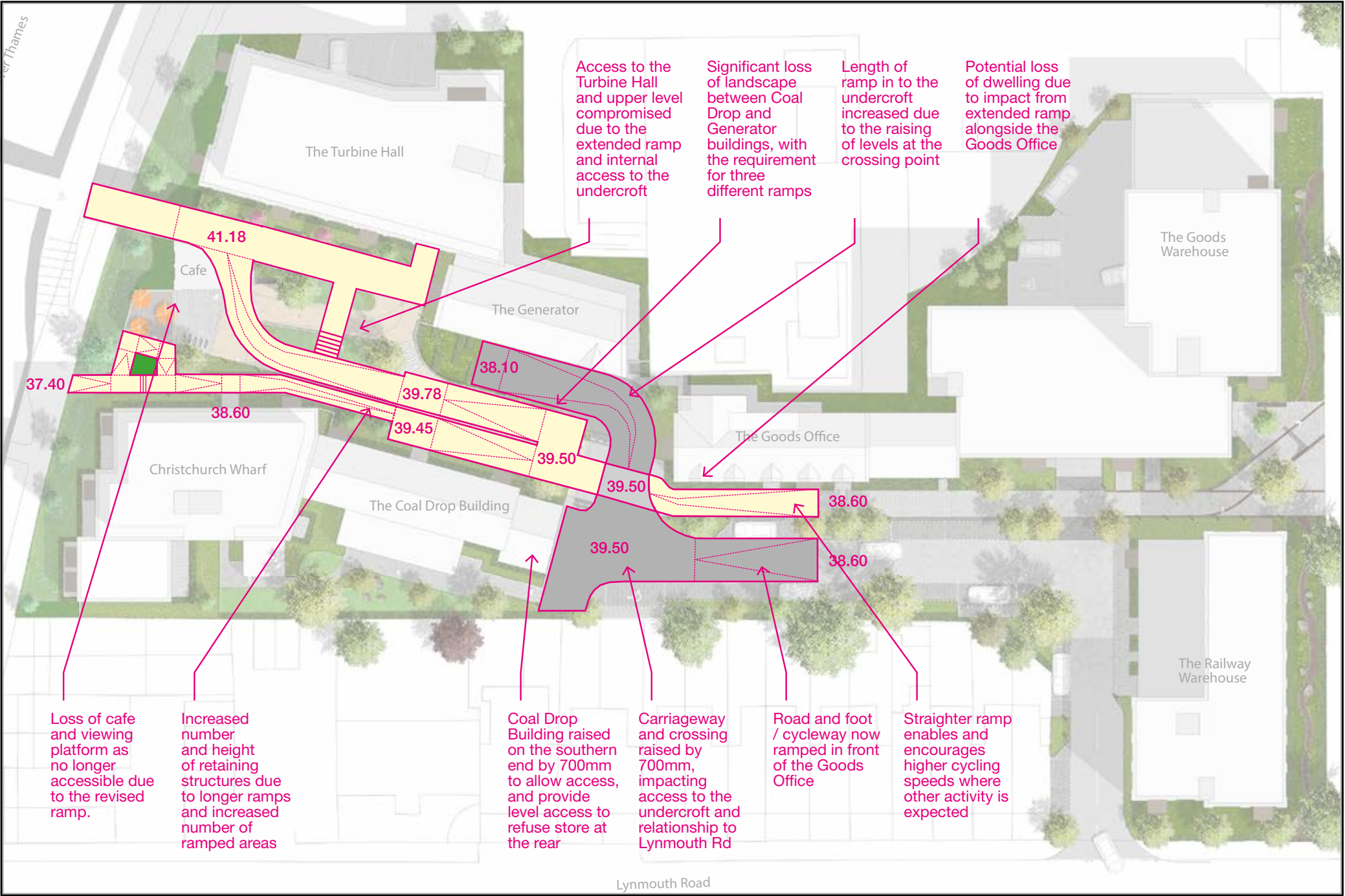


Figure 1.15
Alternate Route Option 2 –
Descend from Crossing

As an alternate option, a more linear route has also been investigated as follows. For the purpose of this sketch, it is assumed the Towpath connection is 2m and the Bridge connection is 3m.

From Vastern Road, the route would be at 5m in width, splitting in to a 2m route to the Towpath and a 3m route to the Bridge to the corner of the Railway Warehouse building.

The towpath route would remain alongside the road and parking at a level of 38.6m AOD up to the entrance of Christchurch Wharf. From this point the route would descend at 1:21 to the towapth, with a more direct stepped connection if required. This would result in the Coal Drop Building dropping in height by almost 1m due to the revised ground floor level to tie-in to the footpath. This lower route would still cross the vehicular entrance to the undercroft.

The Bridge route would begin climbing through the site much closer to Vastern Road, allowing the route to run over the vehicular entrance to the undercroft. From this point, the route would remain at 41.18m AOD through to the connection to the Bridge.

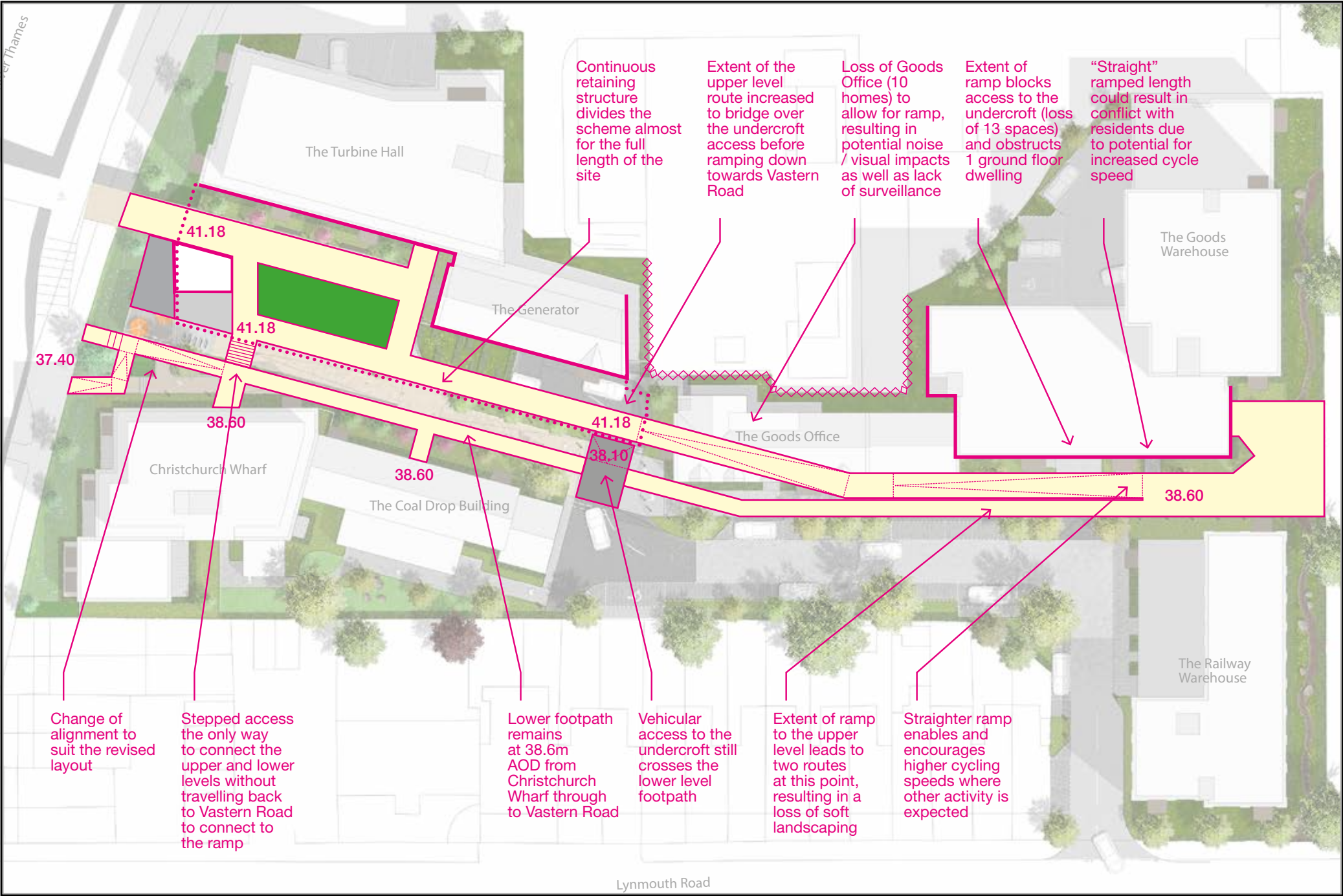
In this scenario the whole of the ground floor of Christchurch Wharf and Coal Drop Building would be facing on to a 3.7m high structure which would support the foot / cycleway, under which would be the undercroft.

An engineered fire solution would be required as a fire appliance would not be able

to access the Turbine Hall and Generator buildings. The Goods Office would need to be removed, resulting in a loss of 10 homes. Access to the undercroft on the Goods Warehouse would be blocked by the ramp, resulting in a loss of 13 parking spaces. This would also require the loss of 1 more home due to the ramp. A revised refuse strategy would also be required for this building. With no building to screen the SSE equipment, views and noise would then become an issue.

In summary, the straightest route (given SSE boundary constraints) would impact the scheme as follows;

- a loss of 11 homes (10 through the loss of the Goods Office due to the route alignment, 1 in the Goods Warehouse through being obscured by the ramp),
- a loss of 13 parking spaces due to being unable to access the undercroft to the Goods Warehouse,
- two routes running the whole length of the site creates a split site with permeability east-west within the site significantly reduced,
- lack of active frontage and natural surveillance between the Turbine Hall and Goods Warehouse,
- loss of the Goods Warehouse resulting in visual and noise impact on the route and residents,
- restricted servicing and delivery vehicle access,
- residents of Christchurch Wharf and Coal Drop building seeking step-free access to the Bridge would need to walk to Vastern Rd,
- straight ramp enables and encourages higher cycling speeds creating conflict.



Part 4.2.1
Assessing the Routes – Proposed Scheme (fig. 1.13)

Figure 1.16
Current Route to
Christchurch Bridge

The current proposed route linking through to Christchurch Bridge consists of a level route through the site (set at 38.60m AOD - the minimum level required in the Flood Risk Assessment) through to the crossing, just north of the Goods Office building. This section of the route consists of a 3.0m wide foot / cycleway, within a 15m wide landscaped street.

From this point, the levels gradually rise at a gradient of 1:21 to the point where the foot / cycleway splits to continue to the Bridge, or down to the Towpath (see Part 4.3). In order to allow fire appliance access, this part of the route increases to 3.7m in width, set within a landscaped route which is 15m in width.

The foot / cycleway then continues at 1:21 to the Cafe entrance / landing (40.41m AOD) before gently turning up to the upper (Bridge) level at 41.18m AOD. These sections are 3.0m in width on the straight, increasing to 5.0m in width where there is a change in direction. The changes in direction provide natural “landings” along the route.

In the submitted proposal, two additional sets of steps are introduced to provide alternative routes for pedestrians.

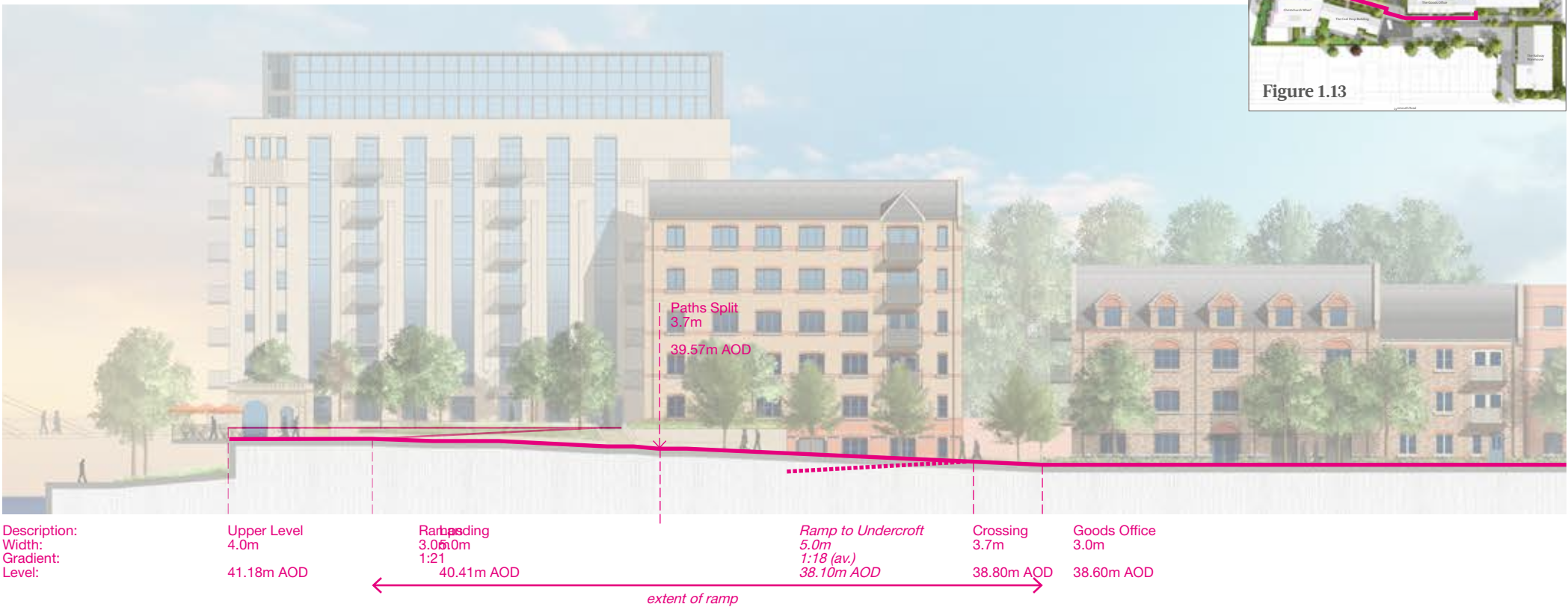


Figure 1.17
Current Route to the
Thames Towpath

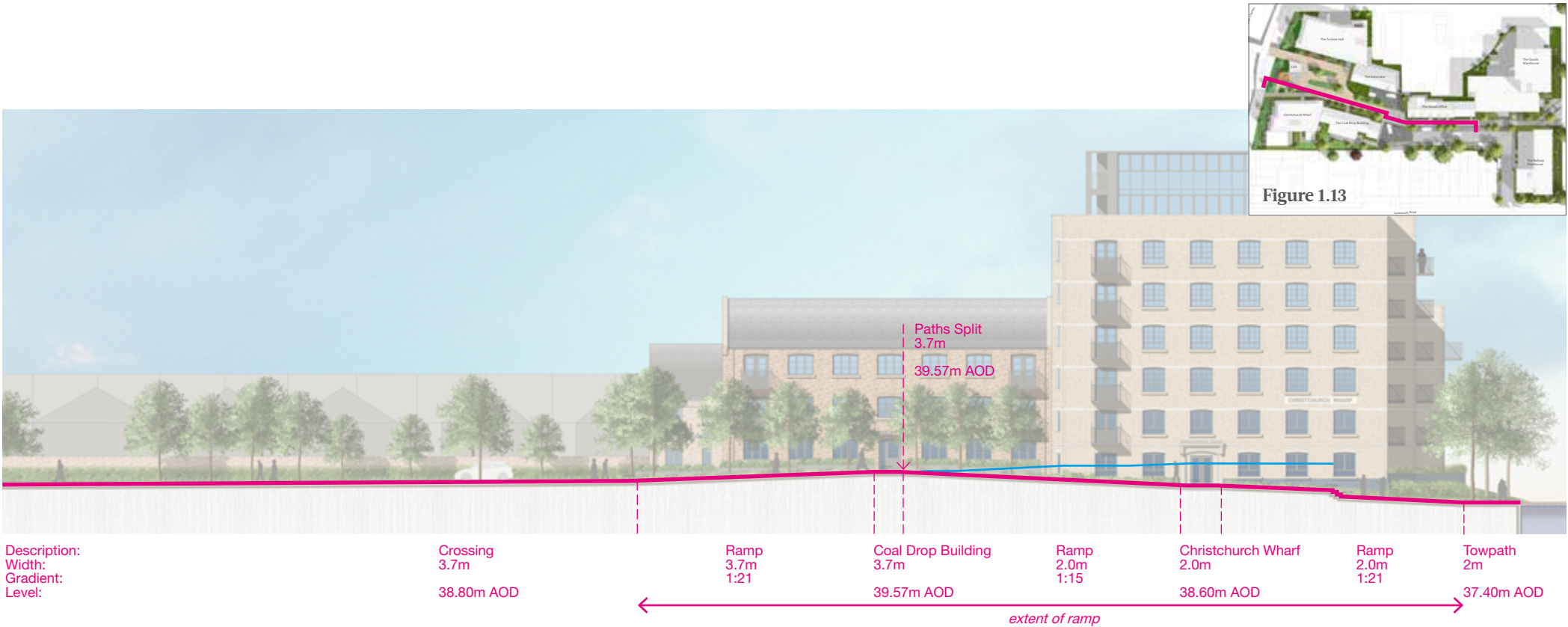
The current route linking through to Christchurch Bridge consists of a level route through the site (set at 38.60m AOD - the minimum level required in the Flood Risk Assessment) through to the crossing, just north of the Good Office building. This section of the route consists of a 3.0m wide foot / cycleway, within a 15m wide landscaped street.

From this point, the levels gradually rise at a gradient of 1:21 to the point where the foot / cycleway splits to continue to the Towpath, or up to the Bridge (see Part 4.2). In order to allow fire appliance access, this part of the route increases to 3.7m in width, set within a landscaped route which is 15m in width.

The foot / cycleway then drops at 1:15 to the entrance to Christchurch Wharf (set at 38.6m AOD in line with the Flood Risk Assessment levels) at a width of 2m. This section at 1:15 is driven by maintaining a 1:21 approach to the bridge and linking in to the FFL of Christchurch Wharf.

From here, levels reduce at 1:21 to the Towpath with a straight route by pedestrians or a slightly longer ramped route.

The blue line illustrates the ramp to the Bridge which these buildings will face. As demonstrated, only 5 windows would be partially affected, but these apartments have dual aspecting to principle rooms.



Part 4.2.2
Assessing the Routes – Alternative Route Option 1 (fig. 1.14)

Figure 1.18
Alternate Route 1 to
Christchurch Bridge

As discussed in Figure 1.14, an alternative approach has been requested to be demonstrated by the LPA, eliminating the “switchbacks”.

Taking this route in reverse from the Bridge, a level “landing” is provided at the upper level of 41.18m AOD before descending through the site at a gradient of 1:21. As the distance from start of ramp to where the next natural break occurs - where the paths split - is in excess of the guidance for a single ramp (30m), a landing must be introduced. The section from the upper level to first landing would be 3.0m wide.

From this point, the width increases to 3.7m to allow for

fire appliance access, and the gradient continues to the point where the path splits at 1:21.

As the foot / cycleway length has been stretched in this scenario to allow for the removal of the switchbacks, the ramp extends much further south. This in turn leads to the crossing area rising 0.7m, which in turn will raise the height of the Goods Office and the vehicular turning area and street against Lynmouth Road gardens by the same amount.

Access to the undercroft would also be affected, with the vehicular entrance moving back to suit an extended ramp from the crossing point leading to a reduction of 4no parking spaces.

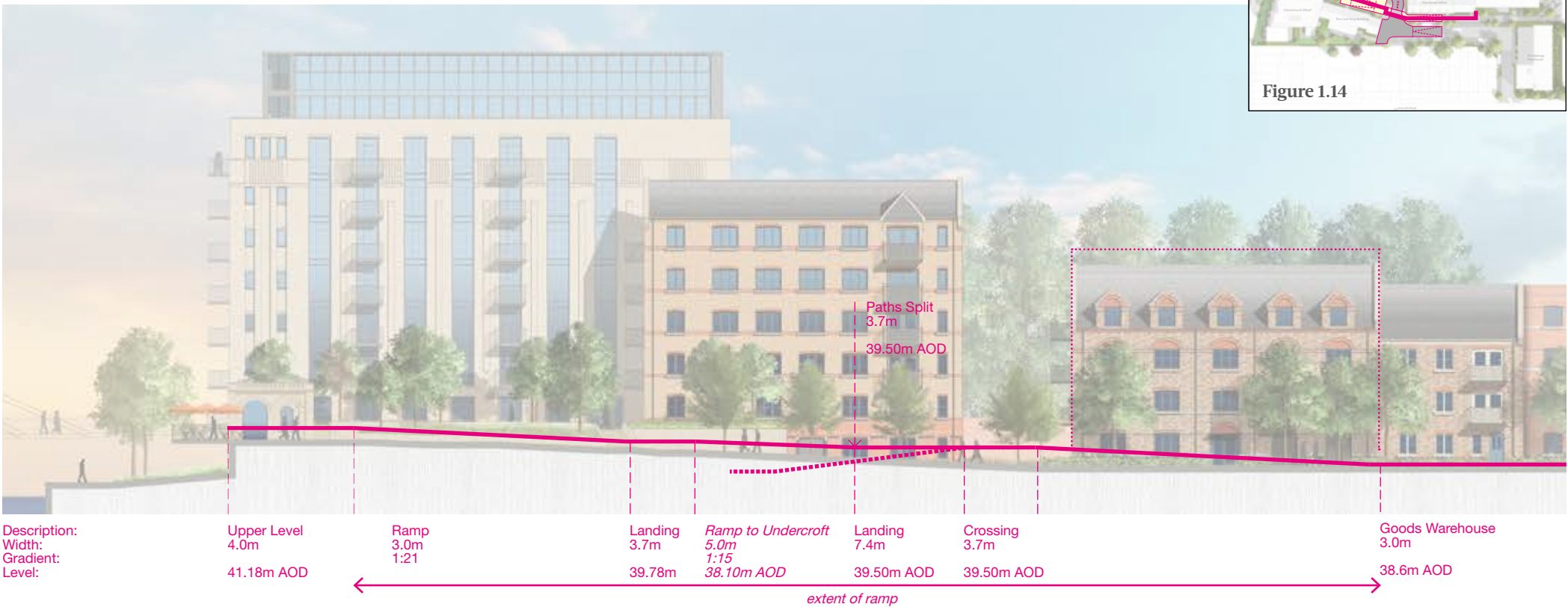


Figure 1.19
Alternate Route 1 to
the Thames Towpath

As discussed in Figure 1.14, an alternative approach has been requested to be demonstrated by the LPA, eliminating the “switchbacks”.

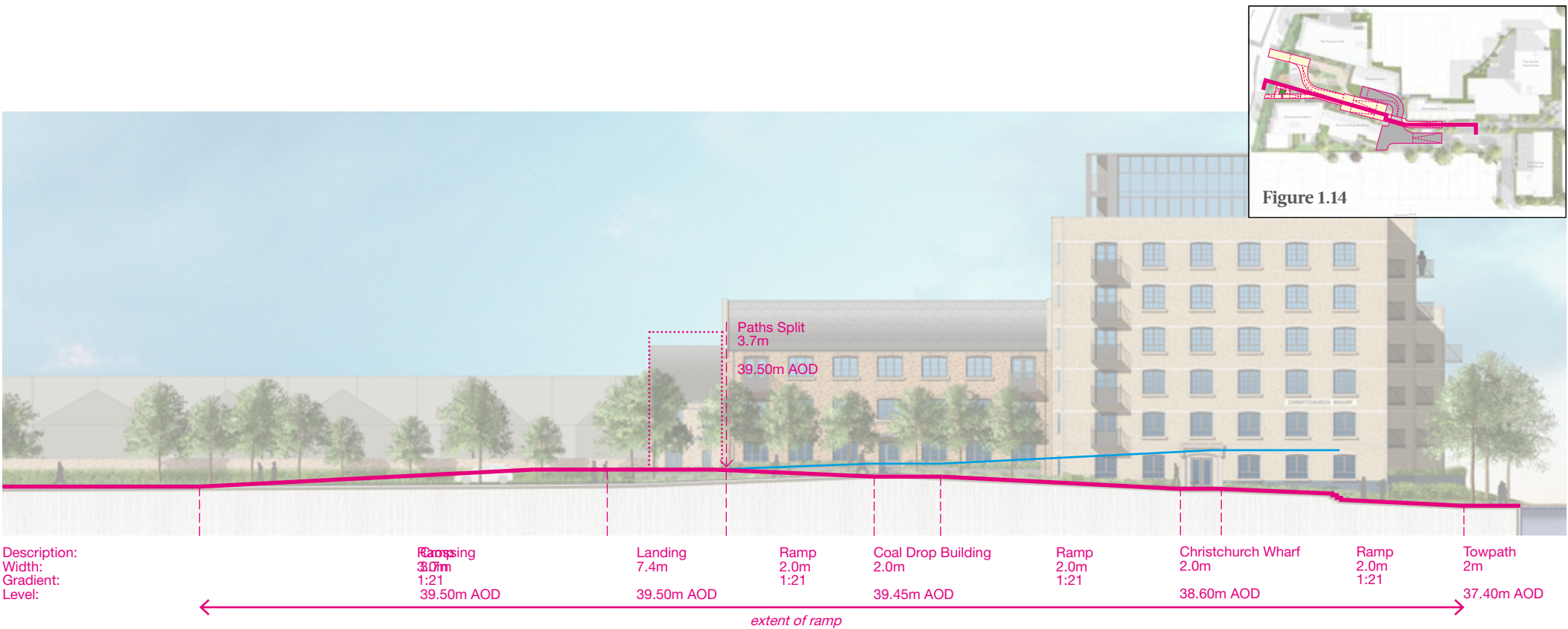
One of the impacts of this approach is that the length of the ramp pushes the point where the footpaths to the Bridge and Towpath diverge further south into the site. In addition, this point then leads to the raising of the route even further southwards through the site. This will result in increased heights and levels against the boundary to the Lynmouth Road properties.

The section from the split to Christchurch Wharf will be at 1:21 in this proposal owing to

the lengthened ramp section created by moving the path split further south.

The section between Christchurch Wharf and the Towpath remains as currently proposed as to introduce a straight ramp here at 1:21 would lower the entrance in to Christchurch Wharf below levels permissible in the Flood Risk Assessment.

The blue line illustrates the ramp to the Bridge. As demonstrated, the whole of the ground floor, including obscuring the entrance, of Christchurch Wharf would be fully obscured in this scenario, with 3 windows of the Coal Drop Building being partially obscured.



Part 4.2.3

Assessing the Routes – Alternative Route Option 2 (fig. 1.15)

Figure 1.18
Alternate Route 1 to
Christchurch Bridge

Introducing a straighter ramped option from the bridge landing toward Vastern Road, whilst still maintaining access to the undercroft parking area beneath the Turbine Hall and Generator buildings would result in the ramp extending much closer to Vastern Road.

This option results in the loss of the Goods Office building - due to a reduced distance between this ramp and the SSE boundary and associated restrictions - and the loss of one ground floor dwelling from the Goods Warehouse - the access would be blocked by the ramp.

In addition, the Goods Office provided natural surveillance of the central part of the scheme which would now be lost, and also provided a visual and acoustic screen to the SSE equipment.

Vehicular access to the undercroft parking area beneath the Goods Warehouse building would be blocked by the ramp resulting in a loss of 13 car parking spaces.

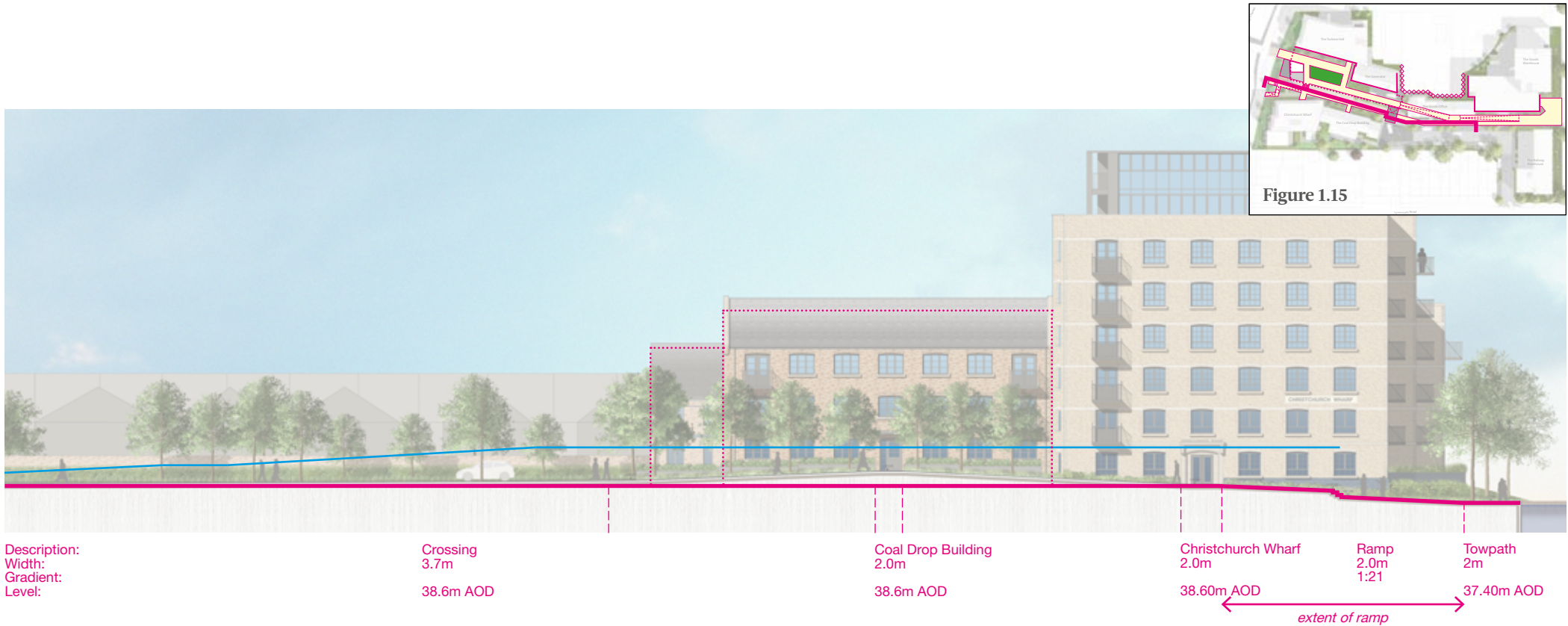
It is also worth noting that this option would result in residents of the Coal Drop Building and Christchurch Wharf only having stepped access to the landscaped upper level and Bridge unless they travelled almost back to Vastern Road to be able to double back on the ramp.



Figure 1.19
Alternate Route 1 to
the Thames Towpath

A benefit of this option is the more simple approach to the Towpath, with the level now being consistent from Vastern Road through to Christchurch Wharf before dropping at 1:21 to the Towpath. The Coal Drop Building would drop to reflect the lower site levels.

However, the result of the Bridge ramp beginning much further south is that all of the ground floor accommodation to these buildings would face on to a retaining wall at 3.7m high (including parapet) set between 5m and 8m from the face of the buildings.



Conclusion

This document has reviewed the assertions that the route within the proposed scheme isn't direct / could be more direct, as well as investigating the impact to the scheme, route and neighbouring dwellings of making the route straighter. A summary of the findings are as follows;

Providing a direct route

- Straight routes connecting the Bridge and Reading Station are not achievable due to the retention of the SSE equipment,
- With the site and SSE constraints, coupled with the fixed points of the Bridge and Reading Station, a direct route has been provided,
- With the constraints of the SSE equipment, loss of built form has negligible effect on the route, but would result in the loss of homes making the site more unviable and reducing natural surveillance / overlooking of the route.
- Other RSAF and Policy objectives relating to the route are achieved in our proposed scheme, including: strong place making; landscape and public realm; active frontages; the route is fully integrated in to the development and urban design solution.

Providing a straighter route

- Levels within the site could need to be raised significantly, either up to 700mm against the gardens of Lynmouth Road properties or through a significantly raised ramp,
- There would be a significant loss of soft landscaping and loss of potential for tree planting along the route,
- The outlook for several homes would be detrimentally impacted through the change in levels through the site,
- Building heights in the middle of the site would need to be increased to adapt to the revised levels. Alternatively it would be necessary to remove these buildings resulting in a loss of 11 homes.
- The straighter routes would enable and encourage higher cycling speeds in an area of public realm where other activity is expected. High approach speeds could then continue to Vastern Road where potential conflict arises with pedestrians, the main road and crossing.

The proposed scheme as submitted has been designed to deliver a well-balanced new community and 'place' within Reading which we hope residents and the wider community can enjoy and be proud of for years to come.

- A direct route has been provided through the site, flanked by areas of high-quality landscaping and opening up to the River Thames with publicly accessible hard and soft landscaped spaces for all to enjoy, coupled with the elevated viewing deck alongside Christchurch Cafe.
- Careful consideration of levels through the site ensure that the whole of the development is fronted by dwellings and doors to enliven the route and provide natural surveillance, and allow for softer changes in levels between parts of the site to ensure the scheme is as inviting and open as possible.