DRAFT 02.09.21

Review of Proposed Walking and Cycling Connections to/from Vearse Farm

Streets reimagined

HighgateTransportation

Contents

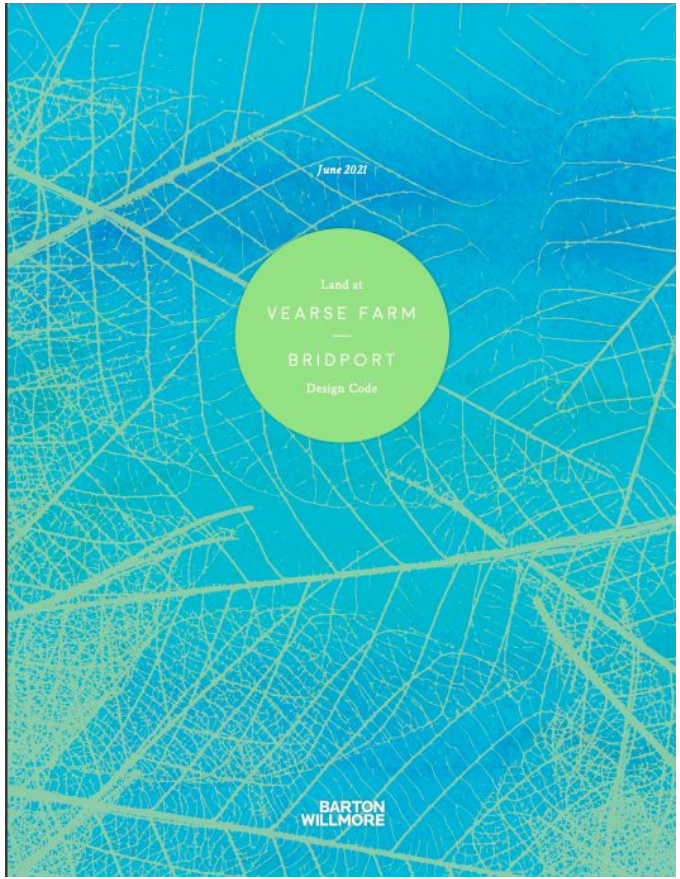
- Brief & Focus of Study
- Review of Vearse Farm Master Plan
- Strategic Walking & Cycling Route Option Analysis
- Detailed Analysis of Preferred Route & Variations

Brief & Background

- Review & Analysis of Vearse Farm's Design and Access Statement, Streetscape Proposals and Design Codes (with reference to Manual for Streets, DfT's Gear Change and LTN 1/20 Cycle Infrastructure Design) and land ownership constraints

- A spatial and movement analysis centred on Western Bridport (covering existing townscape and proposed development at Vearse Farm) with a focus on the potential opportunities for improving walking and cycling connections to/from the proposed development at Vearse Farm and the town

Key Documents Reviewed



Dorset County Council

Dorset Highways
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BRIDPORT TOWN CENTRE BUS STATION TO SKILLING (ROUTE D) CYCLE ROUTE

PRELIMINARY DESIGN REPORT

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August 2017

Director for Environment and the Economy Mike Harries

INVESTORS IN PEOPLE | Bronze

Review of Vearse Farm Master Plan

Review of Proposals

Positives:

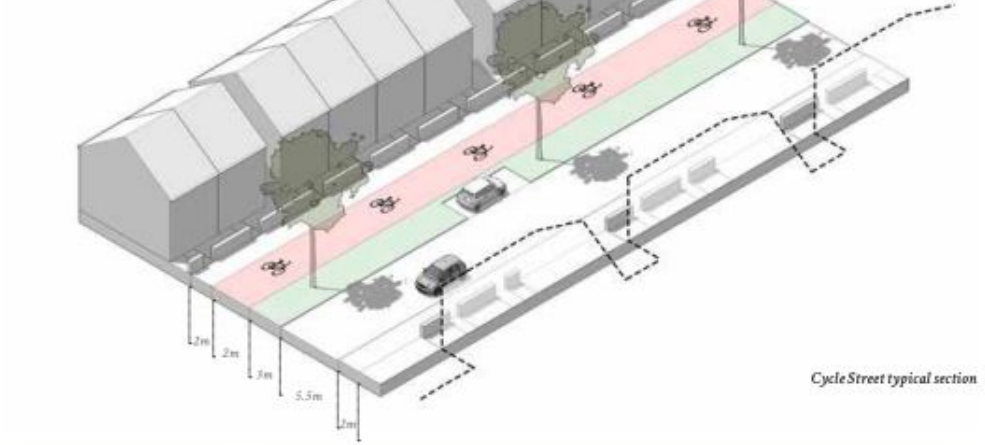
- Permeable/walkable site layout
- Proposed segregated walking/cycle route running through centre of the master plan linking a proposed local centre at northern western part to the eastern perimeter of the site
- Proposed walking and cycling connections to Magdalen Lane and Pine View aligning with existing PROW (Public Rights of Way) routes

Further Opportunities within the Site:

- The movement strategy is mostly focussed on pedestrians and less so cyclists
- There could be more cycle (and/or segregated cycle/footway connections) shown through the site on the Movement Strategy plan, i.e. from the west, south and southeast of the site through to the eastern boundary for town centre access
- There is currently only one segregated cycle route proposed in the design code (referred to as a ‘Cycle Street’) but there is scope for extending this into a network to provide safe access to this key route
- Consideration of cycling as a commuting mode of travel should be made – this would require segregated pedestrian and cycle links to ensure cycle speeds were not detrimental to (perceived and actual) pedestrian safety
- Provision should be made for use and storage of cargo bikes (e.g at local centre and within residential streets)

Further Opportunities within the Site:

- Based on the Design Code, the proposed ‘Cycle Street’ with an off-carriageway cycleway appears to have a variety of widths proposed along its length and some widths don’t meet best practice requirements for a two-way cycleway (e.g. in the ‘Gateway Corridor’) as stated in LTN1/20. Also, they appear to be one-directional as opposed to two-way.



Cycle Street typical section

Design Speed	20 mph
Dimensions	
Carriageway	up to 5.5m
Cycleway	up to 2m on one side
Verge	3m on one side
Footway	2m on either side
Design and Function	
Parking	Visitor parallel parking on one side, depending on access to properties. On plot parking in front or side of dwellings with direct access from the road (only on the side opposite the cycleway)
Traffic Calming	Raised tables at key spaces and junctions (or as required to meet the MfS stds/dft guidance)
Materials	
Carriageway	Bitmac
Footway	Bitmac
Kerbs	Concrete 125m upstand
Pedestrian crossings	Tactile paving
Street furniture	-
Trees	Tall trees at regular 20m intervals planted in grass verge (3m)
Lighting	
Type	Lighting Columns

N.B. Definition: Cycle Street

“Bicycle street is a concept applied to roads and streets that have only residential access function for motorised traffic but are an important and popular link for cycling traffic. The trick is to make the street perceived as a cycle path with (some) cars allowed. This can be helped by signs (“cars are guests” in the Netherlands, bicycle path sign with an exception e.g. for local inhabitants in Germany) and street layout (e.g. continuation of red surface from a cycling path).”

https://cyclehighways.eu/design-and-build/infrastructure/bicycle-streets.html

i.e the proposal is not for a ‘Cycle Street’ by this definition

Further Opportunities within the site:

- No provision is made for cycling along the primary corridor

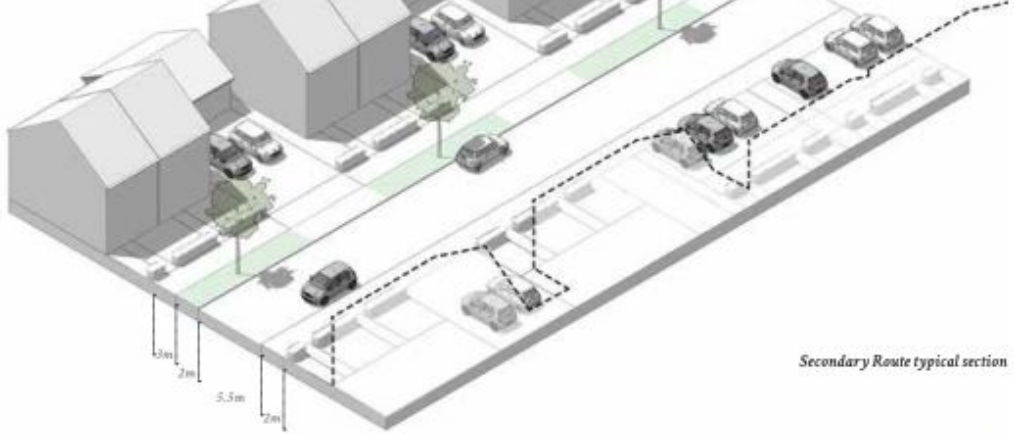
- Need to consider end-to-end journeys and how users would access the ‘Cycle Street’

Primary Route typical section

Design Speed	20 mph
Dimensions	
Carriageway	up to 6.75m
Footway	2m on either side
Design and Function	
Parking	Visitor parking on courts where possible. On plot parking in front or side of dwellings with direct access from the Primary Road
Traffic Calming	Raised tables at key spaces and junctions (or as required to meet the MfS stds/dft guidance)
Materials	
Carriageway	Bitmac
Footway	Bitmac
Kerbs	Concrete 125m upstand
Pedestrian crossings	Tactile paving
Street furniture	Yes
Trees	In front gardens
Lighting	

Further Opportunities within the site:

- Shared footway and cycle paths are proposed in numerous locations which are contrary to current best practice guidance as highlighted in the LTN 1/20 which advocated for separation



Secondary Route typical section

Design Speed	20 mph
Dimensions	
Carriageway	up to 5.5m
Shared cycle/footpath	up to 3m on one side
Verge	2m on one side
Footway	2m on one side
Design and Function	
Parking	Visitor parallel parking on either side, depending on access to properties. On plot parking in front or side of dwellings with direct access from the road
Traffic Calming	Raised tables at key spaces and junctions (or as required to meet the MfS stds/dft guidance)
Materials	
Carriageway	Bitmac
Footway	Bitmac
Kerbs	Concrete 125m upstand
Pedestrian crossings	Tactile paving
Street furniture	-
Trees	On verge
Lighting	
Type	Lighting Columns

Current LTN 1/20 Guidance

8.2 Managing user conflict

8.2.1 The potential conflict between pedestrians and cyclists is often a concern when designing routes away from highways. Although there are few recorded collisions between pedestrians and cyclists on shared use paths, the fact that the two user groups travel at different speeds and sometimes in different directions, can affect the level of comfort of both groups. It is a particular concern for visually impaired people.

8.2.2 Providing sufficient width for the anticipated levels of use will help minimise the risk of conflict between different user groups.

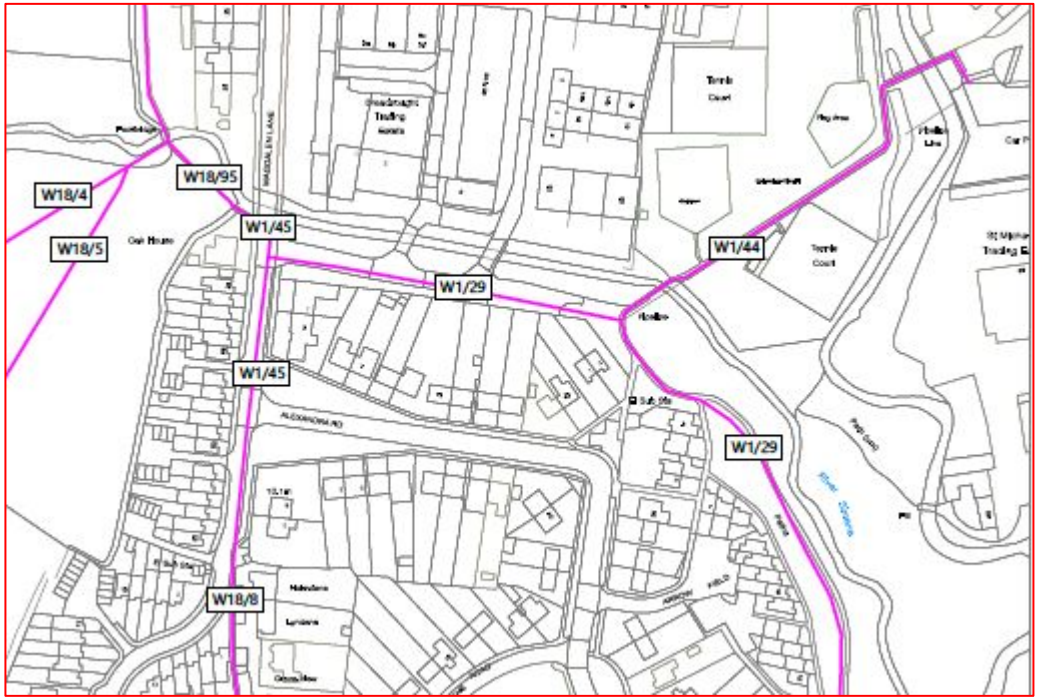
8.2.3 Where space and budget allows, the most effective way to minimise conflict and increase comfort is to provide separate routes for walking and cycling

Example of segregated walking and cycling infrastructure integrated within Green Infrastructure* in new development (Eddington, Cambridge 2020)

*Swale / Tree verge planting

Strategic Walking & Cycling Route Option Analysis

Network of existing PROW routes
(Public Rights of Way)



Existing Walking & Cycling Routes

Existing Public Right of Way

Existing footpath

Existing shared footpath & cyclepath

Currently Proposed/ Upgraded Routes

Option 1: Proposed new link via Dreadnought Trading Estate

Upgrade to shared walking and cycle path

Potential future connection as part of St Michael's redevelopment

Proposed crossing at Magdalen Lane

Proposed Footpath & Cyclepath within Vearse Farm Development

Option 2: Proposed alternative link via Alexandra Road

Option 1: Preferred Linking Route

Advantages

- Most direct option from Vearse Farm to/from town-centre
- No on-street parking

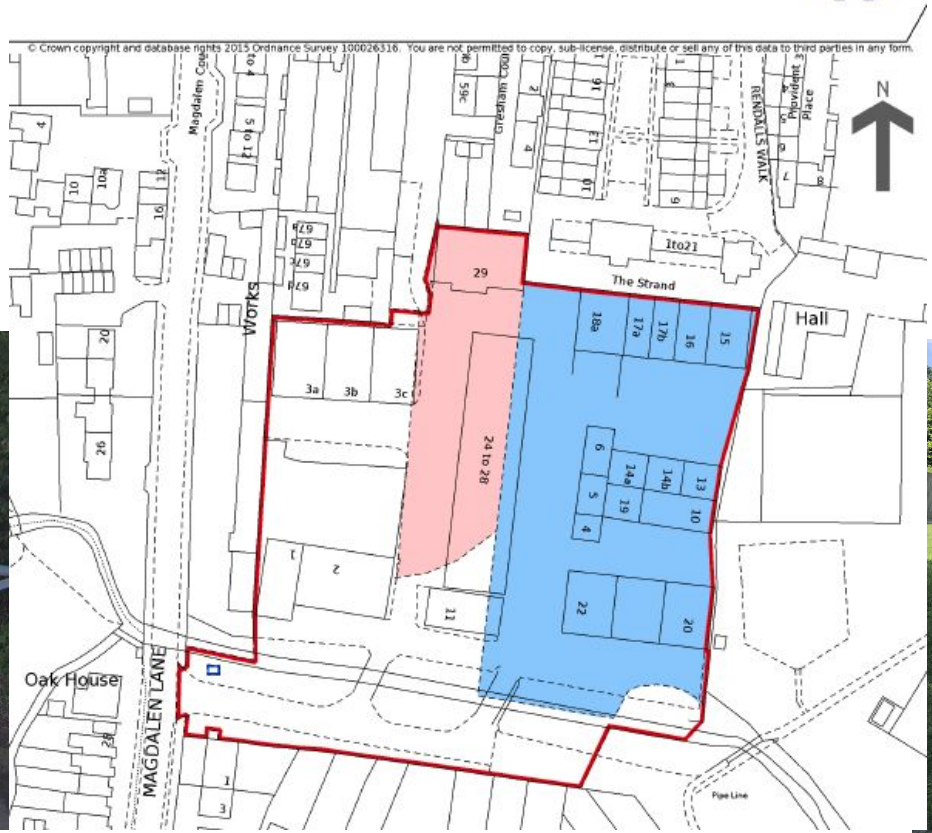
Disadvantages/Considerations

- No/few active frontages (i.e windows at ground level)
- Currently lacks street lighting for part of the route
- Footpath beyond metalled carriageway is not suitably surfaced for cycling (unsealed)

Option 1: Preferred Linking Route

Disadvantages/Considerations

- The carriageway from Magdalen Lane is not public highway
- Whilst there is a PROW (W1/44) in this location, the land is currently in private ownership and utilised as a car park with a lockable gate



Option 1: Preferred Linking Route

Disadvantages/Considerations

- There are other constraints on this route, including topography, access roads and the proximity to the river which may require EA approval for infrastructure improvements

Option 2: Alternative Linking Route

Advantages:

- Active Frontage
- Existing Street Lighting

Disadvantages:

- Indirect route between Vearse Farm and town-centre
- Trees and width present limited scope for off road routes
- On-street parking is less conducive to cycling and limited scope for segregated/protected cycle infrastructure

Disadvantages:

- Creating a connecting link through to Footpath W1/29 from Alexander Road would be challenging due to current land uses in this location (parking, dwelling access points, etc)

Alternative Option 3

Access point via Pine View and/or Magdalen Lane

Signed on-carriageway route along Alexander Road

Alternative signed on-carriageway route via Queen's Road

Connection via Princess Road and existing shared footpath and cyclepath

Option 3:

Advantages

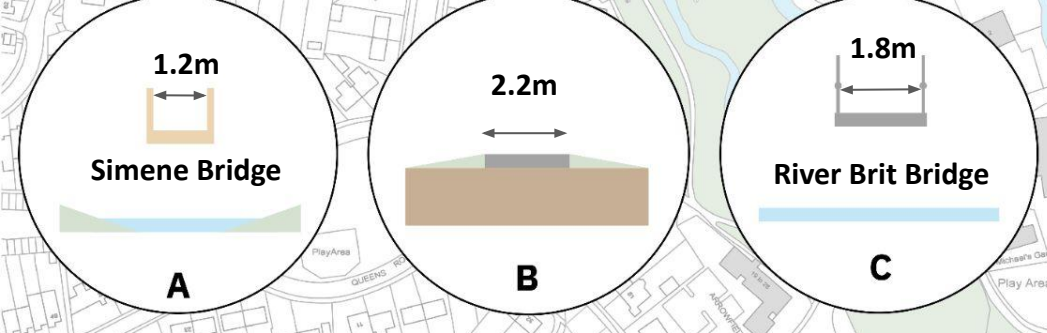
- Does not require third party consent
- Relatively modest capital investment required (mostly signing)

Disadvantages/Considerations

- Proposed route provides connections as far as St Michael's Lane but onward connections are unclear
- Section of route runs along Alexandra Road which is a relatively busy road and therefore may discourage less confident cyclists

Analysis of Preferred Route (Option 1)

Analysis of preferred route; pinch points with insufficient passing width



Key Guidance: Required Dimensions

2-way cycle track	For a >300 peak hour cycle flow track, the desirable width minimum is 3m (LTN 1/20 p.43)
Pedestrian footway	Minimum of 2m is required (Manual For Streets p.68)
Parallel crossing	Provide a legal priority to pedestrians and cyclists. The parallel crossing is similar in form and application to a zebra crossing, but with a separate parallel cycle crossing alongside the zebra crossing (LTN 1/20 p.101)
Fully kerbed cycle tracks	Fully kerbed cycle tracks may be set at carriageway level, at footway level or at an intermediate height between the two (LTN 1/20 p.52)
Bridge width	Overall desirable minimum widths between walls/parapets is a 5.5m separate provision (2m footway, 3m cycle track, 0.5m clearance on one side) (LTN 1/20 p.128)

Brit Bridge: Bike/Cargo Bike Swept Path Analysis

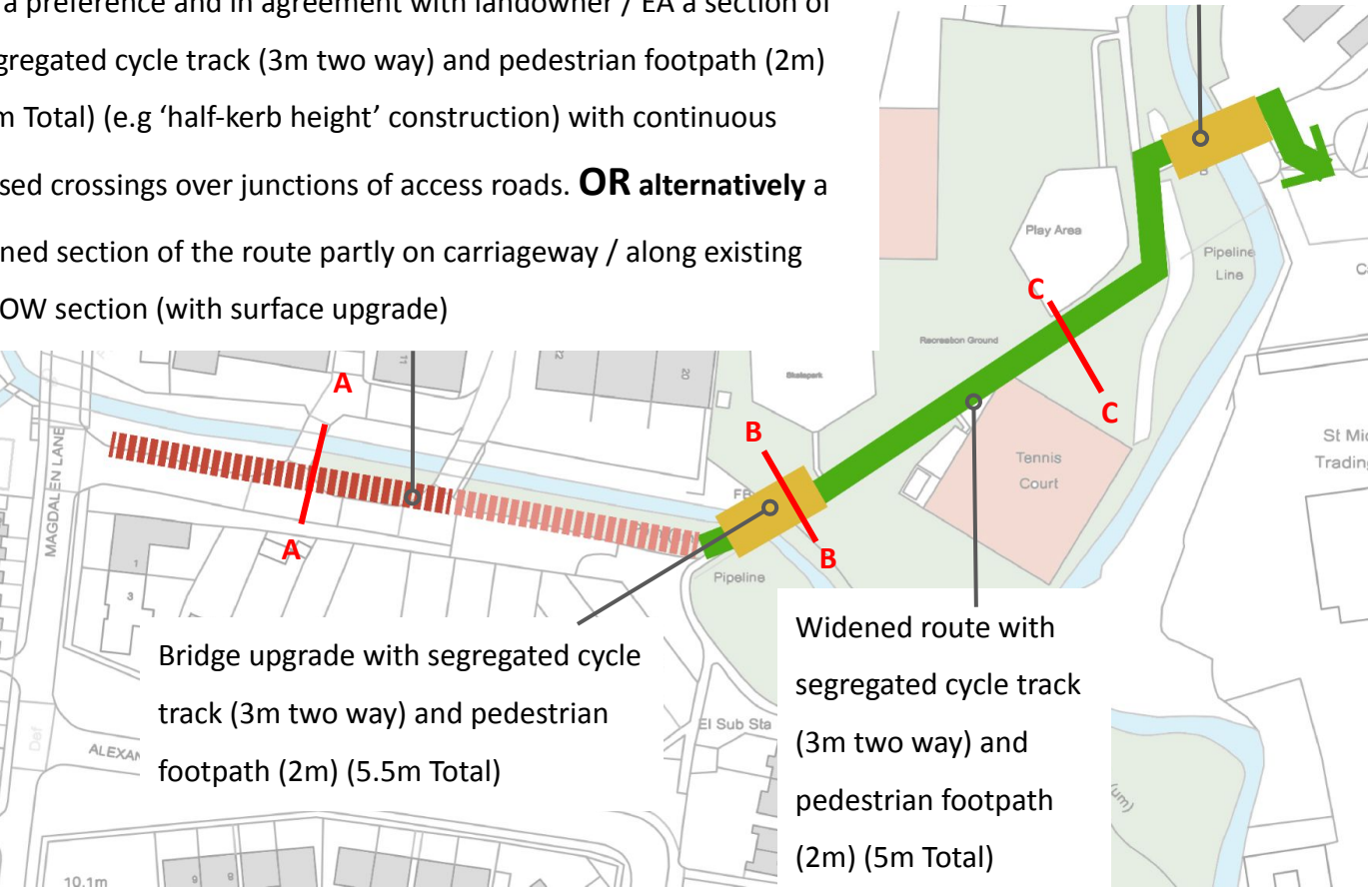
Currently insufficient width for bi-directional shared walking and cycling use on Brit Bridge

- Eastern ramp, with sharp 90 degree bend is unsuitable

Layout: Option 1A

a preference and in agreement with landowner / EA a section of
gregated cycle track (3m two way) and pedestrian footpath (2m)
m Total) (e.g 'half-kerb height' construction) with continuous
sed crossings over junctions of access roads. **OR alternatively** a
ned section of the route partly on carriageway / along existing
OW section (with surface upgrade)

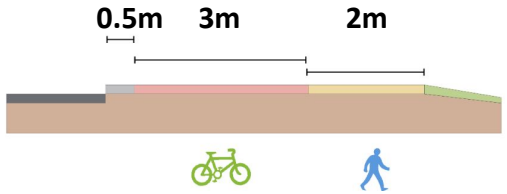
Bridge upgrade with segregated cycle track (3m two way) and pedestrian footpath (2m) (5.5m Total)



Bridge upgrade with segregated cycle track (3m two way) and pedestrian footpath (2m) (5.5m Total)

Widened route with segregated cycle track (3m two way) and pedestrian footpath (2m) (5m Total)

A



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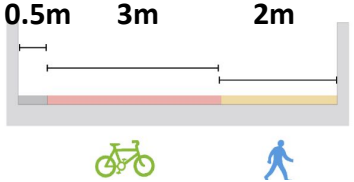

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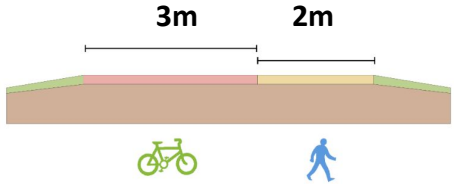


Example of ‘half kerb height’ construction

Image LTN 1/20

Cambridge

Example of fully Segregated Pedestrian/ Cycle Bridge

Example of fully Kerbed Segregated Cycle track and pedestrian route

Indicative illustration of widened and segregated walking and cycling route through Plottingham

Option 1A:

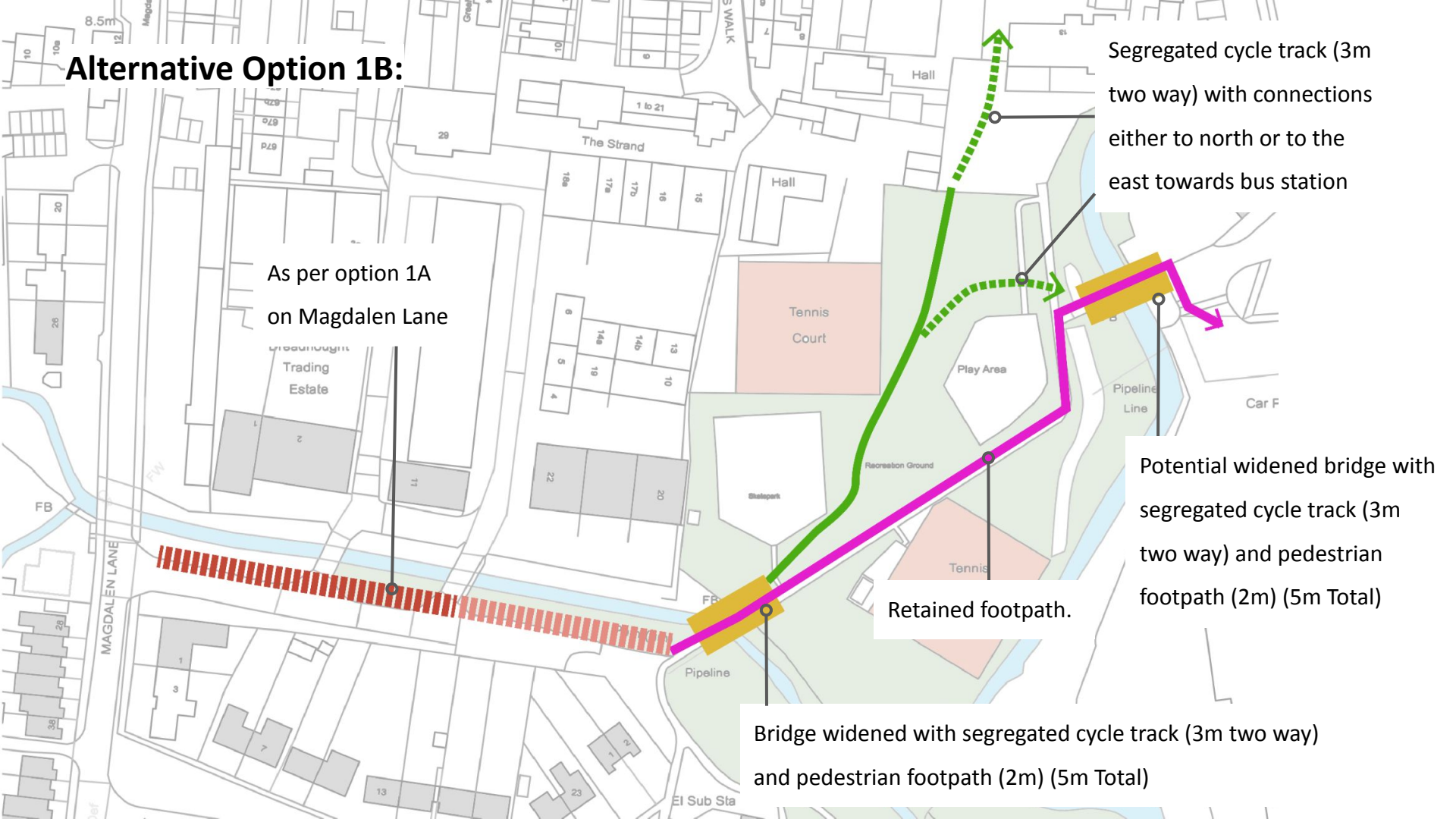
Advantages:

- Provides direct walking/cycling route towards town-centre
- Segregated routes for walking and cycling enhances user experience

Disadvantages:

- Expensive: requires two new bridges and high level of investment to be fully delivered
- A number of physical constraints including land ownership

Alternative Option 1B:



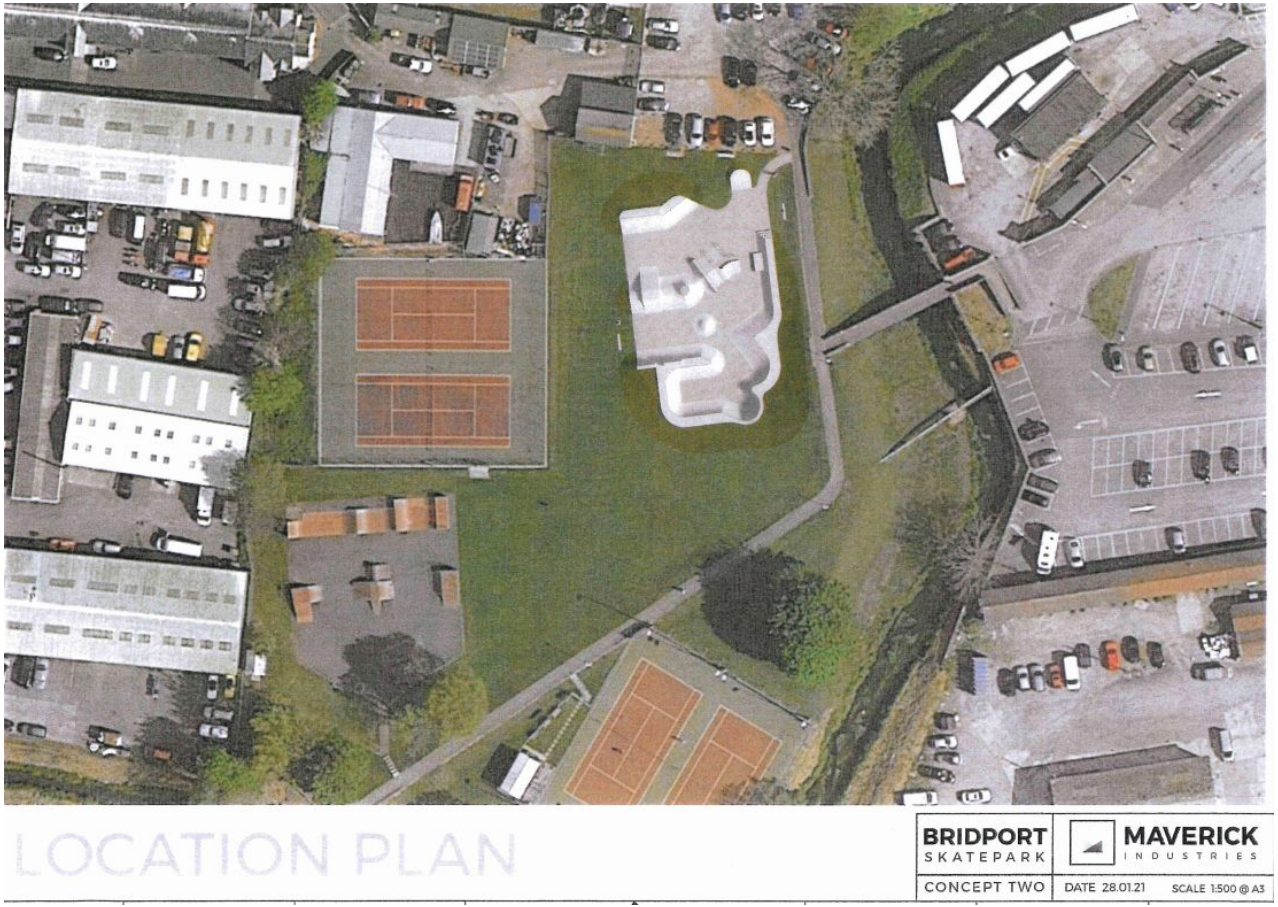
Option 1B:

Advantages:

- Potential cycling link in direction of Colfox school could provide useful link
- Segregated routes for walking and cycling enhances user experience

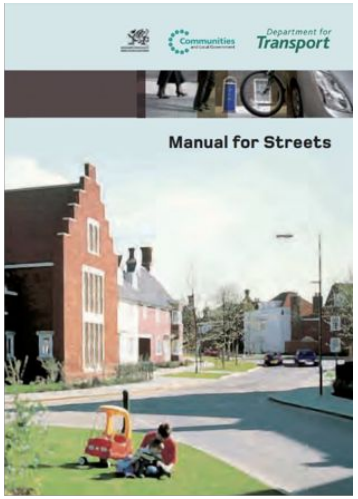
Disadvantages:

- Proposed connection to the north is through several car parks with poor levels of visibility (and loss of parking spaces required)
- Pedestrians may walk on proposed separate cycle route as it provides desire line from Plottingham's car park
- Currently proposed location of new skate park would block the route of the separated cycle track
- Cost of bridge widening



Location of proposed skate park

Lighting - an integral part of the design process



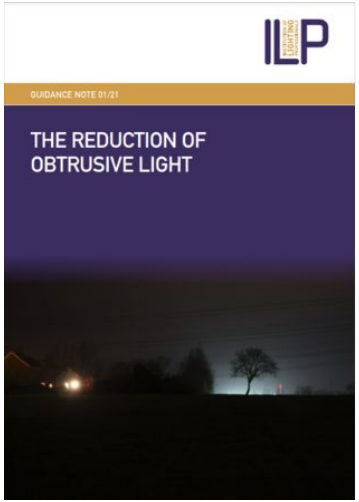
Good lighting practice is the provision of the right light, at the right time, in the right place, controlled by the right system (The Reduction of Obtrusive Light ILP GN01/21).

Lighting should be suitable for the intended use and location, with care taken to avoid light pollution and intrusion.

User Safety (perception and actual)

Manual for Streets sets out that lighting can contribute to:

- Reducing risks of night-time accidents
- Discouraging crime and vandalism
- Making street users feel secure



Lighting should be of high quality and generally be in accordance with BS EN 13201-2, BS EN 13201-3 and BS EN 13201-4. Guidance on lighting design is given in BS 5489-1, Code of Practice for the Design of Road Lighting, to comply with the requirements of BS EN 13201.

Lighting columns should be placed so that they do not impinge on available widths of footways (or cycleways) in the interests of wheelchair users and people pushing prams (and cyclists) or pose a hazard for blind or partially-sighted people.

A street audit can be helpful in determining both the level of lighting and the type of equipment used in the area.

Over-lighting should be avoided. More detailed information is given in the Guidance Notes for the Reduction of Obtrusive Light.

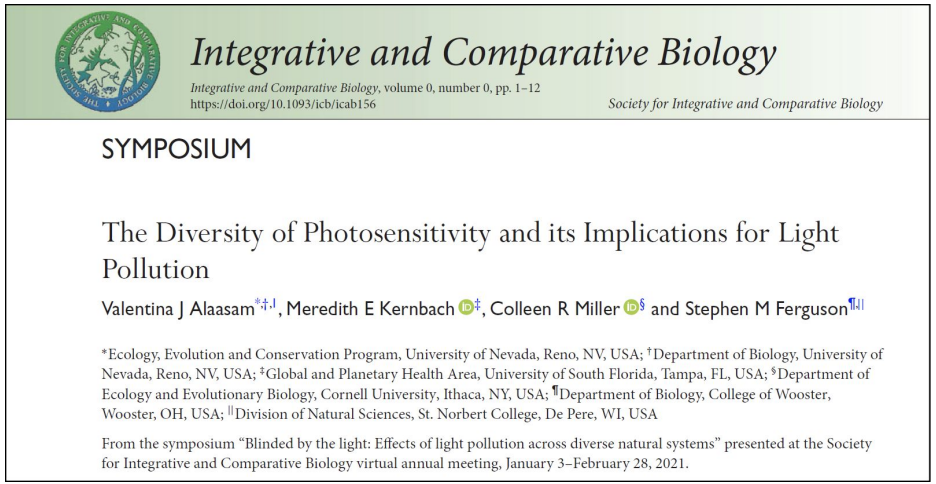
Ecology

The Diversity of Photosensitivity and its Implications for Light Pollution (ICP) sets out that efforts to mitigate light pollution should consider the unique ways species perceive artificial light at night.

Light pollution has a wide-reaching influence in both urban and natural areas and its influence on one species can cascade to influence an entire community.

As research accumulates, decisions about the spectra of light we emit into the night should consider the unique ways local organisms may respond to different technologies and how diverse responses may scale up to have broad ecological implications.

While lighting fulfils a number of important purposes in terms of user-safety, care should be taken not to over-light, which can contribute unnecessarily to light pollution, neighbourhood nuisance and energy consumption (MfS). The scale of lighting in terms of height, massing and lumen intensity and colour must be considered from an early stage.



Integrative and Comparative Biology

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https://doi.org/10.1093/icb/icab156

Society for Integrative and Comparative Biology

SYMPOSIUM

The Diversity of Photosensitivity and its Implications for Light Pollution

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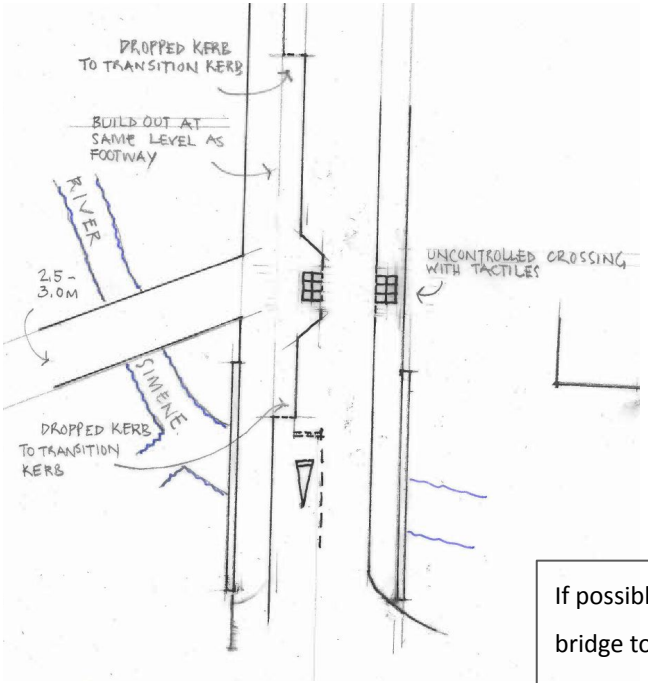
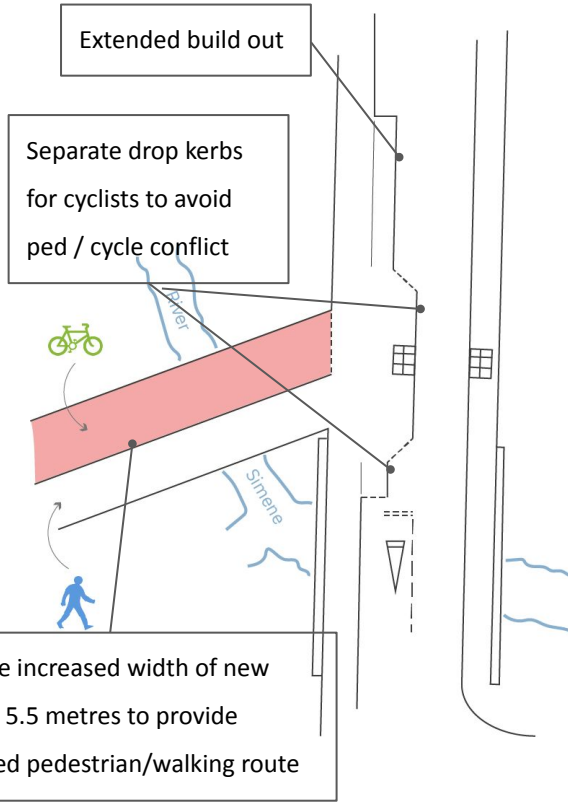
From the symposium "Blinded by the light: Effects of light pollution across diverse natural systems" presented at the Society for Integrative and Comparative Biology virtual annual meeting, January 3–February 28, 2021.

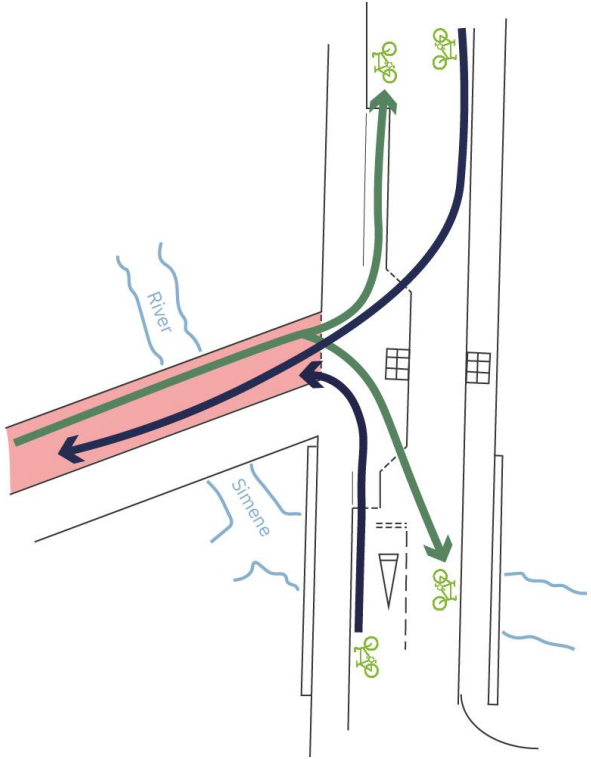
Magdalen Lane Crossing



Proposed Design DCC



Potential Additions



Cycle Movement

Potential to Consider Onward Connections:

Indicative illustration of pedestrian/one way bike crossing from River Brit Bridge arrival over to new one way cycle track and pedestrian footpath through West Street Car Park towards town-centre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