Development Control A Committee

Agenda

Date: Wednesday, 8 July 2020
Time: 5.00 pm
Venue: Remote Zoom Meeting

Distribution:

Councillors: Donald Alexander (Chair), Chris Windows (Vice-Chair), Clive Stevens, Mark Wright, Fabian Breckels, Paul Goggin, Stephen Clarke, Mike Davies, Margaret Hickman, Olly Mead, Afzal Shah and Steve Smith

Copies to: Gary Collins

Issued by: Jeremy Livitt, Democratic Services
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E-mail: democratic.services@bristol.gov.uk
Date: Tuesday, 30 June 2020

Agenda

1. Welcome, Introductions and Safety Information

(Pages 4 - 5)

2. Apologies for Absence and Substitutions

3. Declarations of Interest

To note any interests relevant to the consideration of items on the agenda. Please note that any declarations of interest made at the meeting which are not on the register of interests should be notified to the Monitoring Officer for inclusion.

4. Minutes of the previous meeting held on Wednesday 10th June 2020

To agree the minutes of the last meeting as a correct record. **(Pages 6 - 13)**

5. Appeals

To note appeals lodged, imminent public inquiries and appeals awaiting decision. **(Pages 14 - 24)**

6. Enforcement

To note recent enforcement notices. **(Page 25)**

7. Public Forum

Any member of the public or Councillor may participate in Public Forum. The detailed arrangements for so doing are set out in the Public Information Sheet at the back of this agenda. Public Forum items should be emailed to democratic.services@bristol.gov.uk and please note that the following deadlines will apply in relation to this meeting:-

Questions - Written questions must be received 3 clear working days prior to the meeting. For this meeting, this means that your question(s) must be received in this office at the latest **by 5pm on Thursday 2nd July 2020.**

Petitions and Statements - Petitions and statements must be received on the working day prior to the meeting. For this meeting this means that your submission must be received in this office at the latest **by 12 Noon on Tuesday 7th July 2020.**

Members of the public who wish to present their public forum statement, question or petition at the zoom meeting must register their interest by giving at least two clear working days' notice prior to the meeting **by 2pm on Monday 6th July 2020.**

PLEASE NOTE THAT IN ACCORDANCE WITH THE NEW STANDING ORDERS AGREED BY BRISTOL CITY COUNCIL, YOU MUST SUBMIT EITHER A STATEMENT, PETITION OR QUESTION TO ACCOMPANY YOUR REGISTER TO SPEAK.

In accordance with previous practice adopted for people wishing to speak at Development Control Committees, please note that you may only be allowed 1 minute subject to the number of requests received for the meeting.

8. Planning and Development

To consider the following planning applications **(Page 26)**

- **a) 19/04638/X - Cotham School (Pages 27 - 83)**
- **b) 20/01270/F - Land On South East Side of Severn Road, Avonmouth (Pages 84 - 138)**
- **c) 20/01254/A - Units 5 and 6, Marketside Industrial Site, Albert Road (Pages 139 - 165)**

9. Date of Next Meeting

The next meeting is scheduled to be held as a remote zoom meeting at 2pm on Wednesday 5th August 2020.

Public Information Sheet

Inspection of Papers - Local Government (Access to Information) Act 1985

You can find papers for all our meetings on our website at https://www.bristol.gov.uk/council-meetings

Covid-19: changes to how we hold public meetings

Following changes to government rules, we will use video conferencing to hold all public meetings, including Cabinet, Full Council, regulatory meetings (where planning and licensing decisions are made) and scrutiny.

Councillors will take decisions remotely and the meetings will be broadcast live on YouTube.

Members of the public who wish to present their public forum in person during the video conference must register their interest by giving at least two clear working days' notice to Democratic Services of the request. To take part in the meeting, you will be required to register for a Zoom account, so that Democratic Services is able to match your named Zoom account to your public forum submission, and send you the password protected link and the instructions required to join the Zoom meeting to make your statement or ask your supplementary question(s).

As part of our security arrangements, please note that we will not permit access to the meeting if your Zoom credentials do not match your public forum submission credentials. This is in the interests of helping to ensure a safe meeting environment for all attending or observing proceedings via a live broadcast.

Please note: Members of the public will only be invited into the meeting for the duration of their submission and then be removed to permit the next public forum participant to speak.

Changes to Public Forum

Members of the public may make a written statement, ask a question or present a petition to most meetings. Your statement or question will be sent to the Committee Members and will be published on the Council's website before the meeting. Please send it to democratic.services@bristol.gov.uk. The following requirements apply:

- The statement is received no later than **12.00 noon on the working day before the meeting** and is about a matter which is the responsibility of the committee concerned.
- The question is received no later than **5pm three clear working days before the meeting**.
- Any statement submitted should be no longer than one side of A4 paper. For copyright reasons, we are unable to reproduce or publish newspaper or magazine articles that may be attached to statements.
- **Your intention to attend the meeting must be received no later than two clear working days in advance. The meeting agenda will clearly state the relevant public forum deadlines.**

By participating in public forum business, we will assume that you have consented to your name and the details of your submission being recorded and circulated to the Committee, published on the website and within the minutes. Your statement or question will also be made available to the public via publication on the Council's website and may be provided upon request in response to Freedom of Information Act requests in the future.

We will try to remove personal and identifiable information. However, because of time constraints we cannot guarantee this, and you may therefore wish to consider if your statement contains information that you would prefer not to be in the public domain. Other committee papers may be placed on the council's website and information within them may be searchable on the internet.

During the meeting:

- Public Forum is normally one of the first items on the agenda, although statements and petitions that relate to specific items on the agenda may be taken just before the item concerned.
- There will be no debate on statements or petitions.
- Public Forum will be circulated to the Committee members prior to the meeting and published on the website.
- If you have arranged with Democratic Services to attend the meeting to present your statement or ask a question(s), you should log into Zoom and use the meeting link provided which will admit you to the waiting room.
- The Chair will call each submission in turn and you will be invited into the meeting. When you are invited to speak, please make sure that your presentation focuses on the key issues that you would like Members to consider. This will have the greatest impact.
- Your time allocation may have to be strictly limited if there are a lot of submissions. **This may be as short as one minute, and you may need to be muted if you exceed your allotted time.**
- If there are a large number of submissions on one matter, a representative may be requested to speak on the group's behalf.
- If you do not attend the meeting at which your public forum submission is being taken your statement will be noted by Members.

For further information about procedure rules please refer to our Constitution
https://www.bristol.gov.uk/how-council-decisions-are-made/constitution

Webcasting/ Recording of meetings

Members of the public attending meetings or taking part in Public forum are advised that all virtual public meetings including Full Council and Cabinet meetings are now broadcast live via the council's webcasting pages. The whole of the meeting will be broadcast (except where there are confidential or exempt items).

Other formats and languages and assistance for those with hearing impairment

You can get committee papers in other formats (e.g. large print, audio tape, braille etc) or in community languages by contacting the Democratic Services Officer. Please give as much notice as possible. We cannot guarantee re-formatting or translation of papers before the date of a particular meeting.

Bristol City Council
Minutes of the Development Control A Committee (Remote Meeting)

10th June 2020 at 2.00 pm

Members Present:-
Councillors: Donald Alexander (Chair), Fabian Breckels, Stephen Clarke, Mike Davies, Paul Goggin, Margaret Hickman, Afzal Shah, Steve Smith, Clive Stevens, Chris Windows (Vice-Chair), and Mark Wright (Audio only)

Officers in Attendance:-
Gary Collins, Development Management; Laurence Fallon, Transport Development Management; Norman Cornthwaite, Democratic Services

1. Welcome, Introductions and Safety Information

The Chair welcomed everyone and explained how the Meeting would operate and the process to be followed for the hearing of each application.

2. Confirmation of Chair

It was noted that Councillor Don Alexander was appointed Chair for the 2020/21 Municipal Year by Full Council at its Meeting on 21st May 2020.

3. Confirmation of Vice Chair

It was noted that Councillor Chris Windows was appointed Vice Chair for the 2020/21 Municipal Year by Full Council at its Meeting on 21st May 2020.

4. Membership of the Committee

The Membership of the Committee as set out in the Agenda was noted.

5. Terms of Reference

The Terms of Reference of the Committee as approved by Full Council at its Meeting on 21st May 2020 were noted.

6. Dates and Times of Meetings

There was a debate during which some Members expressed a preference for the Meetings alternating between 2.00 pm and 6.00 pm, whilst other Members expressed a preference for all of the Meetings starting at 2.00 pm at least whilst the Covid 19 Lockdown is in place.

Councillor Breckels moved that the Meetings alternate between 2.00 pm and 6.00 pm.

Councillor Smith seconded this Motion.

On being put to the Vote it was Lost – Voting 4 for, 7 against.

The Chair then suggested that all Meetings start at 2.00 pm at least until the end of the Covid 19 Lockdown when the situation can be reviewed.

This was agreed.

Resolved - that all Meetings of the Committee start at 2.00 pm at least until the end of the Covid 19 Lockdown when the situation can be reviewed.

7. **Apologies for Absence and Substitutions**

There were none.

8. Declarations of Interest

The following was noted:

Councillor Stevens - 20/00691/F - 6 – 8 Belgrave Hill. He has submitted a Public Forum Statement and would not participate in the item.

9. Minutes of the previous meeting

Councillor Smith requested that the following amendment be made to the Minutes - At the top of item 11 on p17 of the report it notes that he said he'd been contacted by a member of SDT. He would just like it to note that it was a social contact and unrelated to the application. This was agreed.

Resolved – that, subject to the above, the minutes of the Meeting held on 13th May 2020 be approved as a correct record and signed by the Chair.

10 Appeals

The Head of Development Management introduced the report providing an overview of the current appeals. He confirmed that the correct version of the report is now on the website.

Councillor Smith asked whether the Council would make an application for costs in relation to the appeals at Hamilton House. The Head of Development Management replied that this would be considered if the appellants had acted unreasonably.

11 Enforcement

The Head of Development Management introduced the report and summarised it for everyone. He confirmed that the correct version of the report is now on the website.

12 Public Forum

Members of the Committee received Public Forum Statements in advance of the meeting.

The Statements were heard before the application they related to and were taken fully into consideration by the Committee prior to reaching a decision.

13 Planning and Development

18/06186/F - 90 West Street St Philips

The Head of Development Management and his representative gave a presentation and summarised the report for this item highlighting the following:

Resubmission of application 17/04953/F - construction of 12no. flats, 2 retail units and addition of one storey to 90 West Street.

Answers for Clarification:

- Information relating to noise has been provided by Environmental Protection; the complaints received relate to noise generated by music; noise insulation will be provided as part of the scheme; traffic noise is generated in West Street; bedrooms are located at the front of the property as some units only have one bedroom; the developer may have to reduce the number of units to achieve all bedrooms being located at the rear
- One of the benefits of the scheme compared to existing residential properties is that noise insulation measures are required
- Measures in this scheme to deal with overheating issues would not result in a substantial change to the building; any material or substantial change to the building would require a further application to be submitted
- Agent of Change relates to one development jeopardising the nature of an area by virtues of being either a noise generating or a noise sensitive use; a new entrant to an area has to mitigate their impact on the area
- The Committee has to give significant weight to the Neighbourhood Development Plan
- It was confirmed that BCC had carried out local consultation in relation to this application

Debate:

- The scheme is a key development for Old Market and the concerns raised by residents should be listened to
- There are concerns about the impact of noise generated in the area
- The benefits of a new build scheme providing noise insultation measures are recognised
- The scheme could be improved in terms of future amenity of proposed residents by some minor changes

Councillor Davies moved the Officer Recommendation that the application be Approved.

Councillor Smith seconded this Motion.

On being put to the vote this Motion was lost 4 / 7

Councillor Alexander proposed deferring a decision to seek changes to the design concerns expressed by the Committee.

Councillor Hickman seconded this Motion.

On being put to the Vote it was

Resolved – (voting 10, for, 1 abstention) that a decision be deferred until a future Meeting of the Committee to enable the Officers to seek changes to the design of the scheme.

20/00691/F - 6-8 Belgrave Hill

Councillors Stevens did not participate in this item, having submitted a Public Forum Statement.

The Head of Development Management and his representative gave a presentation and summarised the report for this item highlighting the following:

Proposed development of a single dwelling (Use Class C3) with associated external works (Self Build).

Answers for Clarification:

- There is a backlog of TROs at the moment and they are taking 6 to 8 months to be legally enforceable; this one would in place before the development is completed
- This is an application for a single dwelling; any change to that would require a different application
- Rock anchor work has been carried out properly in the past and any further work would require geotechnical supervision
- Consultation has been carried out with Avon Fire Service but there was no response in relation to this application; the Fire Service already have access to this area. There are no changes to the access arrangements from the previous application, which had not been refused permission on these grounds.

Debate

- There is loss of amenity, over development, unsuitable site for residential development and loss of parking
- Although it is not a good development, the application is for one house so the reason for the previous refusal has been addressed leaving no reason for refusal
- It is over development and the concerns of the residents should be taken into account
- Concerns about refusal of the application resulting in a loss at any Appeal

- It was noted that the application had been considered a number of times previously and it would be difficult for Officers to prepare reasons for refusal that would be convincing at an Appeal

Councillor Davies moved the Officer Recommendation that the application be Approved.

Councillor Wright seconded this Motion.

On being put to the Vote it was Lost – Voting 3 for, 6 against, 1 abstention.

Councillor Alexander moved that a decision on the application deferred until a future Meeting of the Committee. However there was no seconder for this Motion so it fell before a vote was taken.

Councillor Smith moved that the application be refused for reasons relating to loss of amenity due to the loss of on-street car parking in the area

Councillor Windows seconded this Motion.

On being put to the Vote it was

Resolved – (Voting 6 for, 3 against, 1 abstention) that the application be refused for reasons relating to loss of amenity due to the loss of on-street car parking in the area.

Councillor Wright left the Meeting after this item.

20/01254/A - Unit 5 & 6 Marketside Industrial Site Albert Road

The Head of Development Management and his representative gave a presentation and summarised the report for this item highlighting the following:

Upgrade of 1no. poster panel to digital LED display advertisement (single-sided).

Answers for Clarification:

- Drivers approaching the roundabout would have the usual rights of way at a roundabout; it is a well lit roundabout and the sign would not impact on vision at night
- A condition only allowing the screen to change during daylight hours could be included but it may not be accepted by the applicants
- There has been no previous application for this site and the current advertisement has been there since at least 2008, although without permission
- Adverts do draw attention to themselves but there is already an advert on the site; this one would change every 10 seconds
- The signed route for cyclists is along the River Avon

- Although there are 5 advertisement boards adjacent to the roundabout, none of them are LED; each application has to be judged on its merits, although the legislation does allow cumulative effect to be taken into consideration
- There is no available evidence of an increase in road accidents as a result of the installation of an LED board at Lawrence Hill Roundabout
- Not having planning permission for the current board cannot affect the decision on this application, which has to be determined on its merits
- Albert Road is not an area of high cycle usage

Debate:

- There are no valid reasons to refuse the application, this is one of the least worst examples
- LED screens are different from static screens – they distract drivers and cause highway safety problems
- The application should be deferred pending the receipt of more information on the effect of digital advertising on road accidents
- There are concerns about an increase in cycling in the area and the impact of the proposed advert on safety conditions

Councillor Breckels moved that a decision on the application be deferred until a future Meeting of the Committee and receipt of a report on the impact the installation of LED screens at roundabouts has on the level of road accidents.

Councillor Stevens seconded the Motion. He added that he would like Officers to consider imposing a condition that only allows the screen to change during daylight hours.

On being put to the Vote it was

Resolved – (Voting 10 for, 0 against) - that a decision on the application be deferred until a future Meeting of the Committee and receipt of a report on the impact the installation of LED screens at roundabouts has on the level of road accidents; Officers are also asked to consider imposing a condition that only allows the screen to change during daylight hours.

14 Date of Next Meeting

8th July 2020 at 2.00 pm.

Meeting ended at 5.10 pm.

Chair _____

DEVELOPMENT CONTROL COMMITTEE A

08 July 2020

REPORT OF THE DIRECTOR: DEVELOPMENT OF PLACE

LIST OF CURRENT APPEALS

Householder appeal

Item	Ward	Address, description and appeal type	Date lodged
1	Westbury-on-Trym & Henleaze	74 The Crescent Henleaze Bristol BS9 4RR Demolition of existing single garage and utility room. Erection part single/part double storey side and rear extension. Appeal against refusal Delegated decision	10/02/2020
2	Bishopsworth	8A St Peters Rise Bristol BS13 7LY Proposed detached garage to front of property, with hardstanding for a car parking. Appeal against refusal Delegated decision	25/03/2020
3	Westbury-on-Trym & Henleaze	8 Walton Rise Bristol BS9 3EW Loft conversion with side and rear pitched dormers. Appeal against refusal Delegated decision	12/05/2020
4	Ashley	84 St Andrews Road Montpelier Bristol BS6 5EJ Convert flat roof to roof terrace. Appeal against refusal Delegated decision	12/05/2020
5	Ashley	16 Kathdene Gardens Bristol BS7 9BN Proposed balcony on flat roof two storey rear extension, to be accessed from the new loft bedroom. Appeal against refusal Delegated decision	21/05/2020
6	Brislington West	28 Hulse Road Bristol BS4 5AL Erection of two storey side extension in place of the existing garage. Appeal against refusal Delegated decision	05/06/2020

7	Avonmouth & Lawrence Weston	20 Westbury Lane Bristol BS9 2PE Demolition of existing garage and erection of double garage and home office with ancillary storage. Appeal against refusal Delegated decision	05/06/2020
8	Hengrove & Whitchurch Park	142 Ridgeway Lane Bristol BS14 9PE Retrospective removal of trees and hedges and erection of 1.65 metre high front compound wall. Appeal against refusal Delegated decision	05/06/2020
9	Southmead	38 Lakewood Road Bristol BS10 5HH Single storey side extension and wrap-around front extension. Appeal against refusal Delegated decision	24/06/2020

Informal hearing

Item	Ward	Address, description and appeal type	Date of hearing
10	Ashley	Block C Fifth Floor Hamilton House 80 Stokes Croft Bristol BS1 3QY Notification for Prior Approval for a proposed change of use of a building from use class B1 (Office) to a dwellinghouse (Class C3). Block C5 - 5 Units. Appeal against refusal Delegated decision	TBA
11	Ashley	Block B First Floor Hamilton House 80 Stokes Croft Bristol BS1 3QY Notification for Prior Approval for a proposed change of use of a building from use class B1 (Office) to a dwellinghouse (Class C3). Block B1 - 4 unit. Appeal against refusal Delegated decision	TBA
12	Ashley	Block B Fourth Floor Hamilton House 80 Stokes Croft Bristol BS1 3QY Notification for Prior Approval for a proposed change of use of a building from use class B1 (Office) to a dwellinghouse (Class C3). Block B4 - 3 Units Appeal against refusal Delegated decision	TBA

13	Ashley	Block B Fifth Floor Hamilton House 80 Stokes Croft Bristol BS1 3QY Notification for Prior Approval for a proposed change of use of a building from use class B1 (Office) to a dwellinghouse (Class C3). Block B5 - 4 Units Appeal against refusal Delegated decision	TBA
14	Ashley	Block C First Floor Hamilton House 80 Stokes Croft Bristol BS1 3QY Notification for Prior Approval for a proposed change of use of a building from use class B1 (Office) to a dwellinghouse (Class C3). Block C1 - 5 units Appeal against refusal Delegated decision	TBA
15	Ashley	Block C Fourth Floors Hamilton House 80 Stokes Croft Bristol BS1 3QY Notification for Prior Approval for a proposed change of use of a building from use class B1 (Office) to a dwellinghouse (Class C3). Block C4 - 5 units. Appeal against refusal Delegated decision	TBA
16	Ashley	Ground Floor Hamilton House 80 Stokes Croft Bristol BS1 3QY Notification for Prior Approval for a proposed change of use of a building from use class B1 (Office) to a dwellinghouse (Class C3). Block C, Ground Floor - 1 Unit. Appeal against refusal Delegated decision	TBA

Written representation

Item	Ward	Address, description and appeal type	Date lodged
17	Redland	19 Dundonald Road Bristol BS6 7LN Enforcement notice appeal for the erection of terrace/balcony without planning permission. Appeal against an enforcement notice	06/01/2020
18	Hartcliffe & Withywood	15 Culverwell Road Bristol BS13 9EY Erection of a 2-bedroom dwelling to side 15 Culverwell Road, associated parking and amenity area. Appeal against refusal Delegated decision	13/01/2020

19	Frome Vale	15 Downend Road Fishponds Bristol BS16 5AS Erection of 3/4 bedroom house (Self Build). Appeal against refusal Delegated decision	11/02/2020
20	Brislington West	31 Chatsworth Road Brislington Bristol BS4 3EX Change of use to a 7 Bedroom HMO. Appeal against refusal Delegated decision	14/02/2020
21	Clifton	26 - 28 The Mall Bristol BS8 4DS Erection of mansard roof to facilitate provision of 1No. single bedroom (two bed space) C3 residential apartment. Appeal against refusal Delegated decision	20/02/2020
22	Clifton	26 - 28 The Mall Bristol BS8 4DS Erection of mansard roof to facilitate provision of 1No. single bedroom (two bed space) C3 residential apartment. Appeal against refusal Delegated decision	20/02/2020
23	Redland	145 Bishop Road Bristol BS7 8LX Erection 1 no. two bedroom Passivhaus dwelling with associated vehicular parking, bin and cycle storage, on land to the rear of 145 Bishop Road and access from Kings Drive. Appeal against refusal Delegated decision	24/02/2020
24	Stoke Bishop	Casa Mia Bramble Lane Bristol BS9 1RD Demolition of existing dwelling (Casa Mia) and erection of four detached residential dwellings with associated garages, refuse storage, internal access road and landscaping (resubmission of application 17/07096/F). Appeal against non-determination Delegated decision	24/02/2020
25	Central	Bristol General Hospital Guinea Street Bristol BS1 6SY Erection of two residential dwellings (Use Class C3) and a refuse store. Appeal against refusal Delegated decision	18/03/2020
26	Central	Bristol General Hospital Guinea Street Bristol BS1 6SY Replacement of refuse store with two residential dwellings (Use Class C3) and a refuse store. Appeal against refusal Delegated decision	18/03/2020

27	Brislington East	16 Newbridge Road Bristol BS4 4DJ Upgrade of existing 48 sheet advert to support internally illuminated digital poster. Appeal against refusal Delegated decision	25/03/2020
28	Cotham	Land Adjacent To Kingsley House Kingsley Road Cotham Bristol BS6 6AF Erection of 1 no. garage with associated landscaping works. Appeal against refusal Delegated decision	30/03/2020
29	Bishopston & Ashley Down	Flat 36 Muller House Ashley Down Road Bristol BS7 9DA Application for listed building consent for alterations, extension or demolition of a listed building - Internal works to construct a stud wall in lounge with a door to create a second bedroom. Moving of ceiling light. Appeal against refusal Delegated decision	28/04/2020
30	Central	3 Marsh Street City Centre Bristol BS1 1RT Conversion of the existing 2no. third floor flats into 3no. flats. Appeal against refusal Delegated decision	30/04/2020
31	St George Troopers Hill	57 Nibletts Hill Bristol BS5 8TP Proposed demolition of side extension and detached garage and erection of 2no. new dwelling houses, including site access and landscaping. Appeal against refusal Delegated decision	12/05/2020
32	Central	Slug And Lettuce 26 - 28 St Nicholas Street Bristol BS1 1UB Refurbishment of existing customer external seating area to include provision of two wooden pergolas and a seating Appeal against refusal Delegated decision	12/05/2020
33	Central	Slug & Lettuce 26 - 28 St Nicholas Street Bristol BS1 1UB Replacement internally illuminated oval sign above passage way entrance from Corn Street and internally illuminated wall mounted menu box sign within passageway. New externally illuminated projecting sign to Corn Street frontage. Appeal against refusal Delegated decision	12/05/2020

34	Central	Slug & Lettuce 26 - 28 St Nicholas Street Bristol BS1 1UB Externally illuminated hanging sign adjacent to gated passageway from Corn Street and internally illuminated menu box within passageway. Internally illuminated oval sign, above metal entrance gate from Corn Street. Appeal against refusal Delegated decision	12/05/2020
35	Lawrence Hill	15 Midland Road Bristol BS2 0JT Convert upper floor maisonette to form 2 No. flats including roof alterations. Appeal against refusal Delegated decision	12/05/2020
36	Easton	77 - 83 Church Road Redfield Bristol BS5 9JR Outline application for the erection of a four-storey building comprising 2no. ground floor retail units and 9no. self-contained flats at first, second and third floor levels, with matters of scale, layout and access to be considered (landscaping and design reserved). Appeal against refusal Delegated decision	12/05/2020
37	Windmill Hill	172 St Johns Lane Bristol BS3 5AR Erection of extensions at first and second floor level and the change of use from retail (A1) to 4no. Self-contained flats, including alterations to existing shopfront. Appeal against refusal Delegated decision	13/05/2020
38	Clifton Down	104 Pembroke Road Clifton Bristol BS8 3EQ Enforcement notice appeal for replacement windows without planning permission. Appeal against an enforcement notice	14/05/2020
39	Westbury-on-Trym & Henleaze	The Coach House Grange Court Road Bristol BS9 4DP New dwelling (Self build). Appeal against refusal Delegated decision	18/05/2020
40	Lockleaze	373 - 375 Filton Avenue Bristol BS7 0LH Construction of 4 x 2 bed apartments over new retail unit and associated car parking following demolition of existing single storey to rear of shop. Appeal against non-determination	19/05/2020

41	Frome Vale	67 Symington Road Bristol BS16 2LN One bedroom single storey dwelling in the rear garden of the existing property. Appeal against refusal Delegated decision	19/05/2020
42	Stockwood	2 Harrington Road Bristol BS14 8LD Erection of detached house and associated parking on land to the rear of 2 & 4 Harrington Road, Stockwood. (Self build). Appeal against refusal Delegated decision	19/05/2020
43	Stockwood	2 Harrington Road Bristol BS14 8LD Erection of 2-bed detached house and associated parking on land to the rear of 2 & 4 Harrington Road, Stockwood. (Self Build). Appeal against refusal Delegated decision	19/05/2020
44	Brislington West	Wyevale Garden Centre Bath Road Brislington Bristol BS31 2AD Creation of hardstanding for the purpose of ancillary storage. Appeal against refusal Delegated decision	22/05/2020
45	Redland	44 - 46 Coldharbour Road Bristol BS6 7NA Conversion of existing buildings from mixed use retail (ground floor) with residential maisonette (first and second floor) to five residential flats (4 no. additional flats) with building operations including ground and roof extensions, and roof terraces. Appeal against refusal Delegated decision	22/05/2020
46	Brislington East	91 Wick Road Bristol BS4 4HE To erect a new dwelling. Appeal against refusal Delegated decision	22/05/2020
47	Hartcliffe & Withywood	32 Hollisters Drive Bristol BS13 0EX Proposed first floor extension to existing house, demolition of garage and erection of one new dwelling. Appeal against refusal Delegated decision	26/05/2020
48	Hartcliffe & Withywood	48 Sampsons Road Bristol BS13 0EL Removal of existing garage / annex, erection of 2No 2 bed dwellings (Self Build). Appeal against refusal Delegated decision	26/05/2020

49	Westbury-on-Trym & Henleaze	11 Henleaze Park Bristol BS9 4LR Demolition of existing dwelling and erection of two storey 3no. bed single dwelling house. Appeal against refusal Delegated decision	26/05/2020
50	Hartcliffe & Withywood	30 Honey Garston Road Bristol BS13 9LT Application for a Certificate of Proposed Development - New Garage / work area. Appeal against refusal Delegated decision	29/05/2020
51	Windmill Hill	Plot Of Land Fronting Former 164 - 188 Bath Road Totterdown Bristol BS4 3EF Removal of the 3no. existing hoarding advertisement signs, and installation of 2no. illuminated digital advertisements on support legs. Appeal against refusal Committee	01/06/2020
52	Henbury & Brentry	2 Turnbridge Road Bristol BS10 6PA Demolition of outbuilding, construction of 1 residential dwelling and associated works. Appeal against non-determination Delegated decision	02/06/2020
53	Southmead	37 Ullswater Road Bristol BS10 6DH Proposed two storey extension to accommodate a 3no. bed single dwelling house. Appeal against refusal Delegated decision	02/06/2020
54	Ashley	55 Newfoundland Circus Bristol BS2 9AP 2 x No internally illuminated fascia signs. Appeal against refusal Delegated decision	05/06/2020
55	Hartcliffe & Withywood	Land Rear To Crosscombe Drive Bristol BS13 0DE Construction of two dwellings with associated parking, bike store and refuse storage. Appeal against refusal Delegated decision	05/06/2020

56	Cotham	Kingdom Hall Of Jehovahs Witnesses 64 Hampton Road Bristol BS6 6JA	
		Change of use and internal conversion of No. 64 Hampton Road from a Jehovah's Witness Kingdom Hall in D1 use to 3no of self-contained houses in C3 use (1 x 1 bedroom, 1 x 3 bedroom and 1 x 4 bedroom units). Replacement and alteration of windows and doors and associated external alterations including creation of balconies.	12/06/2020
		Appeal against conditions imposed	
		Delegated decision	
57	Bishopston & Ashley Down	281 Gloucester Road Bishopston Bristol BS7 8NY	
		Erection of canopy and metal glazed enclosure to the existing outdoor seating area to the front of the premises.	12/06/2020
		Appeal against non-determination	
		Delegated decision	
58	Hartcliffe & Withywood	48 Gatehouse Avenue Bristol BS13 9AD	
		Construction of a second storey over an existing single storey side extension to enable subdivision into two separate dwellings.	16/06/2020
		Appeal against refusal	
		Delegated decision	
59	Clifton	The Adam And Eve Hope Chapel Hill Bristol BS8 4ND	
		Extension and conversion of former public house to create 4no. self-contained flats with associated refuse storage and cycle parking (re-submissions of 19/01605/F & 19/01606/LA).	24/06/2020
		Appeal against refusal	
		Delegated decision	
60	Clifton	The Adam And Eve Hope Chapel Hill Bristol BS8 4ND	
		Extension and conversion of former public house to create 4no. self-contained flats with associated refuse storage and cycle parking (re-submissions of 19/01605F & 19/01606/LA).	24/06/2020
		Appeal against refusal	
		Delegated decision	
61	Knowle	Knowle Water Tower Talbot Road Bristol BS3 2NN	
		The removal of 6 no. antennas and their replacement with 6 no. new antennas utilising existing support poles, the replacement of equipment cabinets within the existing internal equipment room and development works ancillary	25/06/2020
		Appeal against refusal	
		Delegated decision	

62	Knowle	Knowle Water Tower Talbot Road Bristol BS3 2NN The removal of 6 no. antennas and their replacement with 6 no. new antennas utilising existing support poles, the replacement of equipment cabinets within the existing internal equipment room and development works ancillary Appeal against refusal Delegated decision	25/06/2020

List of appeal decisions

Item	Ward	Address, description and appeal type	Decision and date decided
63	Hillfields	262 Ridgeway Road Bristol BS16 3LE Erection of a new 2 bedroom (3 bed spaces) end of terrace house over 2 storeys, with associated external works. Appeal against refusal Delegated decision	Appeal dismissed 10/06/2020
64	Westbury-on-Trym & Henleaze	14 Cransley Crescent Bristol BS9 4PG First floor side extension. Appeal against refusal Delegated decision	Appeal dismissed 19/06/2020
65	Lawrence Hill	Cabot Circus Car Park Newfoundland Circus Bristol BS2 9AB Retention of existing internally illuminated 48-sheet display. Appeal against refusal Delegated decision	Appeal allowed 19/06/2020
66	Lawrence Hill	Cabot Circus Car Park Newfoundland Circus Bristol BS2 9AB Replacement of existing internally illuminated 'backlight' landscape advertisement (6m by 3m) with an internally illuminated landscape D-Poster display (8m by 4m). Appeal against refusal Delegated decision	Appeal dismissed 23/06/2020
67	Southmead	123 Lake Road Bristol BS10 5JG Application for a Certificate of Proposed Development - Two storey rear extension. Appeal against non-determination Delegated decision	Appeal dismissed 09/06/2020
68	St George West	SW Whitehall Road (Huawei) Whitehall Road Bristol BS1 5BT Proposed update to existing telecommunications apparatus. Proposed phase 7 monopole C/W wrap round cabinet at base and associated works. Appeal against refusal Delegated decision	Appeal dismissed 10/06/2020

69	Knowle	96 Newquay Road Bristol BS4 1DS Demolition of side extension and construct a two storey 3no.bed single dwelling house to side and single storey extension to rear of existing property. Appeal against refusal Delegated decision	Appeal dismissed 08/06/2020
70	Southmead	130 Doncaster Road Bristol BS10 5PZ Two storey side extension. Appeal against refusal Delegated decision	Appeal dismissed 01/06/2020
71	Stockwood	34 Materman Road Bristol BS14 8SS Two storey side extension. Appeal against refusal Delegated decision	Appeal allowed 23/06/2020
72	Hengrove & Whitchurch Park	EE & H3G Mobile Mast Oatlands Avenue Bristol Installation of a new 20m column with 9 antennas, 7 equipment cabinets and ancillary development (replacing the existing column). Appeal against refusal Delegated decision	Appeal withdrawn 09/06/2020

DEVELOPMENT CONTROL COMMITTEE A
08 July 2020

REPORT OF THE DIRECTOR: DEVELOPMENT OF PLACE

LIST OF ENFORCEMENT NOTICES SERVED

Item	Ward	Address, description and enforcement type	Date issued
1	Clifton Down	41 Alma Vale Road Bristol BS8 2HL Use of ground floor and basement levels of building as domestic storage Enforcement notice	02/06/2020
2	Stoke Bishop	11A Failand Crescent Bristol BS9 2HH Untidy site to front including skip and container.	02/06/2020
3	Windmill Hill	2 Haverstock Road Bristol BS4 2BZ Excavation works, removal of front boundary and formation of hardstanding in front garden area. Enforcement notice	16/06/2020

29 June 2020

Development Control Committee A
8 July 2020

Report of the Director: Development of Place

Index

Planning Applications

Item	Ward	Officer Recommendation	Application No/Address/Description
1	Cotham	Grant	19/04638/X - Cotham School Cotham Lawn Road Bristol BS6 6DT Application to vary condition No. 6 (Approval of road works necessary) attached to planning permission 17/04367/FB - Erection of two storey building providing an additional 12 classrooms, dining and meeting rooms plus utilities. Repositioning of the all-weather pitch (which was approved under planning permission 16/01156/F) (Major Application) - new proposed layout plan for pedestrian improvements (E17047-02).
2	Avonmouth & Lawrence Weston		20/01270/F - Land On The South East Side Of Severn Road Avonmouth Bristol Erection of a single wind turbine, with a tip height of up to 150m, and associated infrastructure including turbine foundations and hardstanding, energy metering substation, site access and internal access track, temporary laydown area and crane hardstanding, energy learning zone, and other associated works including landscaping and ditch diversion.
3	Lawrence Hill	Grant	20/01254/A - Unit 5 & 6 Marketside Industrial Site Albert Road Bristol BS2 0WA Upgrade of 1no. poster panel to digital LED display advertisement (single-sided).

index
v5.0514

Development Control Committee A – 8 July 2020 **ITEM NO. 1**

WARD: Cotham

SITE ADDRESS: Cotham School Cotham Lawn Road Bristol BS6 6DT

APPLICATION NO: 19/04638/X Variation/Deletion of a Condition

DETERMINATION DEADLINE: 24 December 2019

Application to vary condition No. 6 (Approval of road works necessary) attached to planning permission 17/04367/FB - Erection of two storey building providing an additional 12 classrooms, dining and meeting rooms plus utilities. Repositioning of the all-weather pitch (which was approved under planning permission 16/01156/F) (Major Application) - new proposed layout plan for pedestrian improvements (E17047-02).

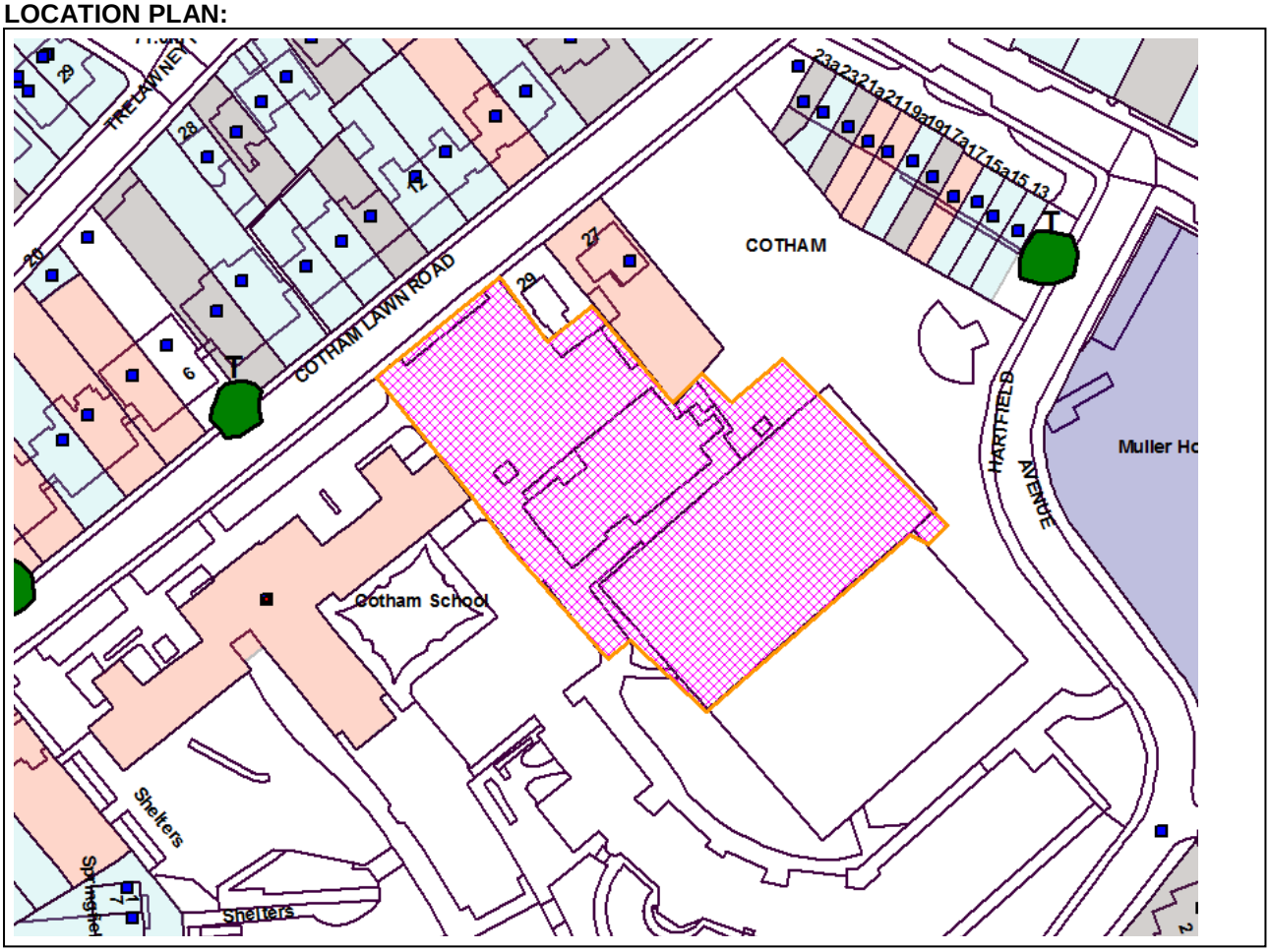
RECOMMENDATION: Grant subject to Condition(s)

AGENT: AWW
Rivergate House
70 Redcliffe Street
Bristol
BS16LS

APPLICANT: Education Capital Team
P.O Box 3176
BS3 9FS

The following plan is for illustrative purposes only, and cannot be guaranteed to be up to date.

LOCATION PLAN:



Development Control Committee A – 8 July 2020
Application No. 19/04638/X: Cotham School Cotham Lawn Road Bristol BS6 6DT

SUMMARY

Consent is sought by the Council's Education Capital Team for a variation of Condition 6, attached to planning permission 17/04367/FB for additional facilities at Cotham School to assist expansion of the school by 135 pupils. That application was approved in November 2017 by Development Control Committee B. A key issue in the determination of application 17/04367/FB was whether the proposal satisfactorily addressed transport and movement issues arising from the school expansion. The application was approved subject to conditions, including Condition 6 that required details of mitigation in the form of offsite highways crossing improvements at the junction of Cotham Grove and Archfield Road. A plan indicating the arrangement of required informal crossing works at this junction was approved under condition application 17/06912/COND, however was subsequently found unsatisfactory following a public consultation exercise and review by the council's Area Engineering Team.

This application presents an alternative layout for the required highway crossing works at the junction of Cotham Grove and Archfield Road to replace that previously approved. The application has attracted 58 objections including from Councillor Negus, Cotham School and Archfield House Nursery, predominantly on the grounds that the crossing works are not required in this location and would impinge on the operation of the nursery. The application is brought before the Planning Committee for decision due to the amount of objections received.

Transport Development Management have reviewed the application details and recommended approval of the application subject to condition, on the grounds that the informal crossing arrangement is necessary and in line with policy requirements.

APPLICATION AND BACKGROUND

This application for a variation of condition has been made by the Council's Education Capital Team under S73 of the Town and Country Planning Act 1990. The application is for the variation of condition 6 attached to planning permission 17/04367/FB, relating to the expansion of Cotham School. That application was approved in November 2017 by Development Control Committee B. The application related to the construction of a two storey building to accommodate 12 classrooms, a dining hall and meeting rooms and the repositioning the artificial grass all-weather pitch and enclosure. The additional accommodation was to assist the expansion of Cotham School by an additional 135 pupils. The Committee report relating to 17/04367/FB is appended to this report.

A key issue in the determination of application 17/04367/FB was whether the proposal satisfactorily addressed transport and movement issues arising from the school expansion. The application was accompanied with a detailed Transport Statement that included assessment of the existing site and local highway network including pedestrian and cycle routes to school and public transport, appraisal of the impacts of the proposed development, the routes used to access the school and identified barriers to sustainable travel use.

The Transport Statement outlined that pre-application correspondence with BCC confirmed parents have commented that the junction of Cotham Grove and Archfield Road is unsafe to cross in its current format. An 'in principle' potential pedestrian crossing improvement scheme at the junction was promoted, to reduce the crossing distance by providing pavement build outs.

S. 5.19 of the Transport Statement confirmed
''Given the locations of the existing crossing facilities near to the school, the current traffic levels, and the optimum pedestrian desire lines, there are no other locations where additional crossing provision would generate significant benefits for travellers to and from the school site. This is supported by the accident data analysis which did not identify any clusters of pedestrian accidents within the study

area, plus a qualitative assessment of the proposals in light of the site's recent Travel Survey results''

Transport Development Management (TDM) were consulted as part of the application assessment and advised that the increase in movements associated with the school expansion would not lead to a severe impact, subject to securing offsite local highway improvements in the area. Specific off site mitigation was identified as necessary, including a contribution for improvements to the zebra crossing in Hampton Road, and undertaking of minor crossing improvements at Archfield Road with its junction with Cotham Grove, based on the scheme included with the Transport Statement. These improvements were secured by a Memorandum of Understanding between departments, and further details sought via Condition 6 attached to the consent.

The wording of Condition 6 attached to permission 17/04367/FB is provided below;

6. Approval of road works necessary
Prior to commencement of development a general arrangement plan(s) indicating the following works to the highway shall be submitted and approved in writing by the Local Planning Authority
footway build outs at the junction of Cotham Grove and Archfield Road as shown in principle on Drawing 0838-001
Improvements to the zebra crossing in Hampton Road including but not limited to surface dressing, lining and halos
These works shall then be completed prior to first occupation of the development to the satisfaction of the Local Highway Authority and as approved in writing by the Local Planning Authority.

Condition 6 was discharged by the LPA in 2018 as part of application 17/06912/COND, on the proviso the works were carried out in accordance with the approved details. Details submitted with this condition application altered the pavement build out and crossing point from the east side of Pitch Lane to the west, in front of the premises of 2-4 Archfield Road (Archfield Nursery and Pre-School). The details were reviewed by TDM and considered an improvement in terms of road safety from the 'in principle' proposals considered as part of the application 17/04367/FB, as the proposed works at the junction much better accommodated the identified desire line for those crossing in this location, in particular pupils of Cotham School.

Following approval of 17/06912/COND, the council's Area Engineering Team undertook a further assessment and redesign of the scheme due to a number of issues that had emerged, including responses to a local consultation exercise, as well as the camber and drainage of the carriageway.

The current application now seeks consent for an alternative layout for the identified crossing at the Archfield Road/Cotham Grove junction, to replace details previously discharged under application 17/06912/COND. The pavement build out in front of 2-4 Archfield Road has now been moved in front of 2 Archfield Road, closer to the corner with Pitch Lane, as shown on plan E17047-02-Rev A.

SITE DESCRIPTION

Cotham Grove and Archfield Road are in the Cotham ward of the city, within the Cotham and Redland Conservation Area. The immediate area is predominantly residential and also includes a number of pre-school settings, Cotham Gardens Primary School ,Cotham secondary school and Post 16 centre. Archfield House nursery and Preschool is located at 2-4 Archfield Road.

RELEVANT HISTORY

Most relevant to the current application is application 17/04367/FB for the Erection of two storey building providing an additional 12 classrooms, dining and meeting rooms plus utilities. Repositioning of the all-weather pitch (which was approved under planning permission 16/01156/F) (Major Application) GRANTED subject to conditions. Various condition applications relating to this consent

have been determined, see planning record for details.

PUBLICITY AND CONSULTATION

The application has been advertised in the press and on site notice. 347 properties in the immediate vicinity of Archfield Road and Cotham Grove have been consulted, with a total of 58 representations received objecting to the application. The objections to the application are summarised below;

Councillor Negus has objected to the proposals as follows;

'There is a fundamental failure of communication during the developing stages of planning applications around potential conditions which is particularly galling as these should be designed to offset deleterious effects on communities. Yet those affected and the councillors who represent them are not consulted. The only time when this democratic deficit was addressed was during the period when this city operated with Neighbourhood Partnerships. At this time community preferences for highways and other beneficial works were listed, properly assessed and indeed graded. Even then there were still ill-considered and opaque decisions such as the crossing in Bath Buildings which came out of a planning application and required a 'no left turn' from Cheltenham Road which forces traffic through Redland Road in my ward (narrow and with a primary school with a dangerous crossing place with traffic use now intensified and no notification or consultation with the Cotham councillors).

The junction of Archfield Road and Cotham Grove was a high priority Neighbourhood Partnership requested safety scheme. Proposals were also discussed for safer pedestrian crossing of Cotham Brow.

Alongside this came the conditions, not discussed with local people and their councillors, arising from the planning permission for the development of Cotham School. To everyone's surprise proposals belatedly emerged for two new crossing places, presumably under the Safer Routes to Schools scheme. This incident has been the subject to a great deal of correspondence in the past but just recently has the school given its side of the argument and it has become clear just how faulted this process has been and how unreliable has been the explanations given.

Firstly, a local nursery ' one of the biggest in the area ' was confronted with a new crossing place immediately outside its premises. The initial proposals which have latterly been slightly improved, flew in the face of the design work that had been considered for easing (and indeed changing the priority of) this junction. I was given several long explanations of this bizarre process which clearly pleased no one from which I assumed that this was a requirement stemming from the planning approval and imposed by Cotham School whom I assumed were paying for them from the same fund that delivered their new accommodation.

I have now made further enquiries and understand:
* the crossings are being paid for by Bristol city council taxpayers.
* the crossings are not where local residents and councillors requested through the Neighbourhood Partnership procedure
* the crossings are a complete surprise to Cotham school who were not consulted
* one of the crossings, and maybe both, are not where the school would wish them to be because they do not reflect the principal routes that their students use
* one of the crossings will be serving a route that the school has sought to discourage in their attempts to maintain good order from their travelling students
* this crossing adjacent to Pitch Lane will now facilitate students crossing a dangerous junction which as a result of this solution can now not be made safer which was the objective of the neighbourhood partnership proposal

It is beyond my comprehension as to how Bristol City Council could have allowed itself to make this many mistakes of process, consultation, design and cost. Taxpayers are being required to pay for

work which not only they did not request but flies in the face of what they wanted. The school, who obstensively was the organisation whose students were to be delivered more safely to their homes was not consulted about 'safer routes to school' but now at last having found out what is being done in their name are saying this does not match their requirements and will encourage students to use routes that are not considered the best and could put them in harm's way. Alongside this a large long-standing local nursery requiring safe drop-off and collection areas has been seriously compromised.

I am hard-pressed to see any good at all from this shoddy process. Once again officers are so sure they know best that they don't bother to ask those who actually know better.

I've been fighting a battle for several years to get a safe crossing in Redland Road to serve Cotham Gardens primary school. There have been some near misses but I'm still hoping that this is achieved before a child is seriously injured, for it will happen. In the face of this known risk, for which there is no funding nor likely to be for several years, this council has decided to spend taxpayers money on unwanted crossings one of which is quite likely to have its use discouraged to stop it doing more harm than good.

I hope you can appreciate how frustrated I feel at this appalling situation which if it were not so serious would be ridiculous. Any one of these stages could be held up as a failure of process. Together they are a testament of arrogant disregard for commonsense, consultation, procedure and financial probity. Where is the regimen of Bundhred in this sorry saga? How much more money has been wasted by a failure to seek the opinion of those who have better local knowledge? How much longer will this isolation be allowed to continue without a thorough investigation?

A single view of an individual or from an inflexible organisation is likely to be flawed if it is not exposed to scrutiny. It's more important than ever now to measure twice and get things right, first time. Be it the result of arrogance or lack of trust this failure results in costly and poor solutions. If this council can't put its own house right this will need to be placed in front of those who can sort it out.'

Cotham School and Archfield House Nursery and Pre school have jointly objected to the proposed location for the crossing on the following summarised grounds -

The school had no knowledge about the crossing from the Local Area Partnership; there has been no discussion with the school to determine the location of the crossing or the method used to determine it.

The data used to determine the location of the crossing in Archfield Road is not current and does not take into account changes to the demographic picture of the students attending Cotham school now. The students in the majority reside in the St.Pauls, Easton areas and other areas of the city adjacent to these localities.Their journeys to school are usually through Nine Trees Hill and on through Kingsdown Parade, they cross Cotham Road on the pedestrian crossing on Cotham Road and enter through the new student reception on Cotham Road. Other students use the bus service to travel to school alighting at the stop by the church at the top of Cotham Road, accessing the student entrance on Cotham Road using the pedestrian crossing opposite this entrance.

Other cohorts of students walk up St. Michaels Hill and a small contingent use the train services into Redland station, crossing Archfield Road by Cotham Gardens Primary School. They do not enter school through the main entrance on Cotham Lawn Road any longer, this would have been the entry point for students when your survey was conducted.

Looking at accident records over the last five years around Archfield Road, four accidents have been recorded on the route from Redland station, two of these classed as 'serious'. Two accidents have been recorded at the junction of Cotham Grove and Cotham Brow. However, there have been no recorded accidents at the junction outside Archfield Nursery. Raising the question again, is this the correct location for this crossing solution? Where is the evidence that this is the correct location?

The scheme does not provide adequate safeguards for pupils of Cotham School and Archfield House nursery in terms of providing =safe routes to school ; the crossing in its proposed location jeopardises the safety and security of children in the care of Archfield Nursery.

Archfield House Nursery and PreSchool have provided a separate objection comment on the following summarised grounds -

Archfield House Nursery and Pre School were not consulted on either the original planning application 17/04367/FB or the discharge of condition application 17/06912/COND. The Nursery strongly objects to the proposed crossing due to the significant detrimental impact on the safe access to and efficient operation of the nursery and pre-school created by the new crossing and the associated conflict with requirements in the National Planning Policy Framework (NPPF), Policy BCS10 (Transport and Access Improvements) of the Bristol Core Strategy and Policy DM23 of the Site Allocations and Development Management Policies Local Plan.

The crossing would introduce potential conflict between vehicles entering the setting, parents dropping off and collecting children from the nursery and pedestrians using the crossing, especially during peak drop off hours (08.00 - 08.45), which coincide with peak hours of walking to school.

The footway build outs will also result in the loss of an informal car parking space immediately in front of the nursery and pre-school which is utilised regularly for the safe drop off and collection of children, deliveries, servicing, maintenance and parent visitors. The pavement buildout outside the nursery would jeopardise the security of the entry system for parents and visitors. The proposed bollards would hinder access for vehicles to No 2 Archfield Road including emergency vehicles. Vehicles stopping to access No 2 Archfield Road via the security system would conflict with pedestrians using the crossing.

Archfield Nursery and Pre-School recognise the slight improvements associated with the revised proposals (plan reference: E17047-02-A) the subject of this application, compared to the plan included in the highways consultation earlier this year. The revised proposals reduce potential conflict with the entrance to the staff car park at No 4 Archfield Road and retain a usable 'H-bar' marked area immediately in front of the entrance to No. 4 for the drop-off and collection of children and use for service vehicles, deliveries and visitors. However, as set out in detail in this submission, the proposals would still have a damaging impact on the safe access and efficient operation of the nursery and preschool and in this regard conflict with national planning policy and policy in the Bristol Local Plan.

The data relied upon is considered out of date and appropriate up to date technical survey work should be undertaken to inform the location of and support any proposals for a new pedestrian crossing to help serve pupils walking to Cotham School. A pedestrian crossing assessment undertaken by Cotswold Transport Planning (the results of which were originally set out in a report to Bristol City Council in May 2018 and confirmed in Cotswold Transport Planning submission to Bristol City Council in response to the highways consultation (in a letter dated 8th January 2019) which confirmed that the proposed crossing location immediately in front of the nursery does not correspond with the desire lines of students walking to/from school.

We trust that the comments and concerns raised herein will be fully considered by the Council and anticipate that Archfield House Nursery and Pre-school can work in conjunction with Bristol City Council and Cotham School to secure the more appropriate location for a future pedestrian crossing.

Other third party objections have been raised on the following grounds;

-The data used to establish that the crossing is needed in this location is unreliable;
-Pupils at Cotham School use other routes to school; improvements are needed at other locations

such as the end of Cotham Grove at the junction with Cotham Brow
-The crossing in this location is a waste of public funds
-The loss of informal parking outside the nursery will make it difficult for parents to drop off and pick up their children
-Safety of children attending the nursery will be compromised due to the proximity of the security code operated access point
-The nursery stores bins on the pavement and this has not been considered
-The nursery is an established business in the area and its needs should be taken into account
-The consultation process has been flawed because you have failed to undertake a thorough consultation with affected residents and businesses and this has resulted in costs to Cotham School and the nursery in getting external advice.
-Additional pollution will be created by cars waiting at the crossing and this will have an effect at children in the nursery
-A crossing in this location will compromise access to Pitch Lane
-No accidents have occurred at this junction but 4 (2 serious) have occurred at one end of Archfield Road and 2 at the other end.
-Continued expansion of Cotham School is impacting on our residential area which needs to retain its quality of life for families and residents rather than experience an increase of road and traffic calming just to service increasing numbers of school students.

Internal consultation

Transport Development Management (TDM) have been consulted on the application and recommended approval of the scheme of works. The TDM consultation response is appended in full to this report.

RELEVANT POLICIES

National Planning Policy Framework – February 2019
Bristol Local Plan comprising Core Strategy (Adopted June 2011), Site Allocations and Development Management Policies (Adopted July 2014) and (as appropriate) the Bristol Central Area Plan (Adopted March 2015) and (as appropriate) the Old Market Quarter Neighbourhood Development Plan 2016 and Lawrence Weston Neighbourhood Development Plan 2017 and the Hengrove and Whitchurch Park Neighbourhood Development Plan 2019.

In determining this application, the Local Planning Authority has had regard to all relevant policies of the Bristol Local Plan and relevant guidance.

KEY ISSUE

IS THE PROPOSED LAYOUT OF HIGHWAY IMPROVEMENTS AT THE JUNCTION OF ARCHIELD ROAD AND COTHAM GROVE CONSIDERED ACCEPTABLE?

The NPPF promotes sustainable transport and expects that applications for development should give priority first to pedestrian and cycle movements, both within the scheme and within neighbouring areas. Development is also expected to create places that are safe, secure and attractive and which minimise the scope for conflicts between pedestrians, cyclists and vehicles,

Local Plan Policies BCS10 and DM23 prioritise pedestrian movement and seek to ensure that development contributes to the provision of safe streets. Proposals should minimise the need to travel, especially by private car, and maximise opportunities for the use of walking, cycling and public transport. Development should not give rise to unacceptable traffic conditions and will be expected to provide for pedestrians and cyclists, including, where appropriate, enhancing the pedestrian and cycle network.

The need for highway crossing improvements at the junction of Archfield Road and Cotham Grove was accepted under application 17/04367/FB, to help address the local impacts of the Cotham School expansion and improve pedestrian safety in the area. TDM have provided review of the submissions and public consultation responses, with their formal comments setting out the background to the proposal, assessment and recommendation appended to this report.

TDM have concluded that the crossing layout as proposed at the Archfield Road/Cotham Grove junction remains a necessary measure to mitigate impacts of the Cotham school expansion under application 17/04367/FB. The revised layout has been arrived at following a public consultation exercise, survey and audit by engineers who are qualified road safety auditors.

It is recognised that the proposals have attracted considerable public opposition, including on the grounds that the crossing arrangement will impair access for vehicles to the nursery, as well as reduce parking opportunities for parents at drop off and collection times. The detailed objections have been considered and it is acknowledged that the crossing point as proposed would impact on how Archfield House nursery is currently serviced, as well as reduce the informal drop off space parents use in front of 2-4 Archfield Road. However, the proposed arrangement would continue to allow access into no 4 Archfield Road for vehicles and there is adequate on-street parking in the vicinity of the site to allow for parent drop off and servicing and deliveries. In terms of the safeguarding issues raised, given that the entry pad entrance system to the nursery is already in the public domain, it is considered that risks arising from pedestrians viewing the access code are not so significant as to outweigh the public benefits of the crossing point .

The application has been considered against the development plan and material considerations, as well as conditions attached to the existing permission 17/04367/FB. Overall, on the basis of the specialist advice provided from TDM, officers consider that the scheme of highway works proposed under this application is in line with policy requirements and a necessary mitigation to offset increased pupil numbers at Cotham school, as part of the parent application 17/04367/FB. The measures will address road safety concerns at this junction and result in considerable public benefit, that is considered to outweigh the impacts on the continued operation of the nursery.

CONCLUSION

The application is recommended for approval, subject to amended conditions to reflect the application and conditions already discharged under application 17/04367/FB.

RECOMMENDED GRANT subject to condition(s)

Conditions to be confirmed via the Amendment Sheet

Advices

1 Works on the Public Highway

The development hereby approved includes the carrying out of work on the adopted highway. You are advised that before undertaking work on the adopted highway you must enter into a highway agreement under Section 278 of the Highways Act 1980 with the council, which would specify the works and the terms and conditions under which they are to be carried out.

Contact the Highway Authority's Transport Development Management Team at transportDM@bristol.gov.uk allowing sufficient time for the preparation and signing of the Agreement. You will be required to pay fees to cover the council's costs in undertaking the

following actions:

I. Drafting the Agreement
II. A Monitoring Fee equivalent to 15% of the planning application fee
III. Approving the highway details
IV. Inspecting the highway works

NB: Planning permission is not permission to work in the highway. A Highway Agreement under Section 278 of the Highways Act 1980 must be completed, the bond secured and the Highway Authority's technical approval and inspection fees paid before any drawings will be considered and approved.

2 Traffic Regulation Order (TRO)

You are advised that a Traffic Regulation Order (TRO) is required. You must submit a plan to a scale of 1:1000 of an indicative scheme for a TRO, along with timescales for commencement and completion of the development. Please be aware that the statutory TRO process is not straightforward; involving the public advertisement of the proposal(s) and the resolution of any objections.

You should expect a minimum of six months to elapse between the Highway Authority's TRO Team confirming that it has all the information necessary to enable it to proceed and the TRO being advertised. You will not be permitted to implement the TRO measures until the TRO has been sealed, and we cannot always guarantee the outcome of the process.

We cannot begin the TRO process until the appropriate fee has been received. To arrange for a TRO to be processed contact the Highway Authority's Transport Development Management Team at transportdm@bristol.gov.uk

N.B. The cost of implementing any lining, signing or resurfacing required by the TRO is separate to the TRO fees, which solely cover the administration required to prepare, consult, amend and seal the TRO.

3 Impact on the highway network during construction

The development hereby approved and any associated highway works required, is likely to impact on the operation of the highway network during its construction (and any demolition required). You are advised to contact the Highway Authorities Network Management Team at traffic@bristol.gov.uk before undertaking any work, to discuss any temporary traffic management measures required, such as footway, Public Right of Way, carriageway closures or temporary parking restrictions a minimum of eight weeks prior to any activity on site to enable Temporary Traffic Regulation Orders to be prepared and a programme of Temporary Traffic Management measures to be agreed.

4 Excavation Works on the Adopted Highway

The development hereby approved includes the carrying out of excavation works on the adopted highway. You are advised that before undertaking any work on the adopted highway you will require a Section 171 (Excavation) Licence from the Highway Authority which is available at www.bristol.gov.uk/highwaylicences

Strategic City Transport

Transport Development Management

Application Response

To:	Anna Schroeder, City Centre Area Planning Team
From:	Stephen Rockey, Transport Development Management
Ext:	36560
Date:	26th of June 2020
Address:	Cotham School, Cotham Lawn Road, Bristol, BS6 6DT
Application No:	19/04638/X
Proposal:	Application to vary condition No. 6 (Approval of road works necessary) attached to planning permission 17/04367/FB - Erection of two storey building providing an additional 12 classrooms, dining and meeting rooms plus utilities. Repositioning of the all-weather pitch (which was approved under planning permission 16/01156/F) (Major Application) - new proposed layout plan for pedestrian improvements (E17047-01)
Response:	Final
Earlier Response:	13th of March 2020
Recommendation:	**Approve subject to conditions**

Principle

The application proposes to construct a build out incorporating pedestrian crossing facilities, to the west of the junction of Archfield Road/Pitch Lane. Whilst the scheme has generated a number of objections, principally from parents and representatives of Archfield House Nursery, Transport Development Management (TDM) consider the proposals would improve the safety of pedestrians by providing better visibility, reducing the crossing distance and helping to reduce vehicle speeds. Given the council's commitment to make walking safe, pleasant, accessible, the first choice for local journeys and the fact that it would benefit pupils of Cotham School, TDM recommends that it be approved.

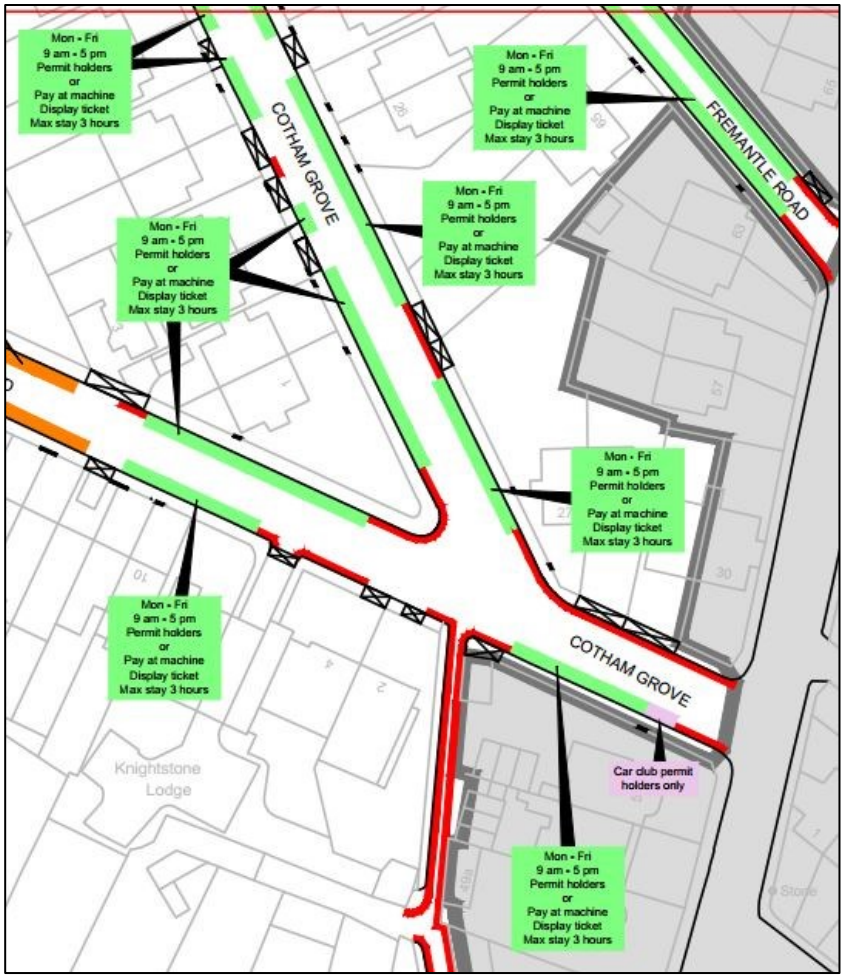
Highway Network

The site is located at the two way priority junction between Archfield Road and Cotham Grove. Within the bellmouth, which measures approximately 17.75m in length, there are in-line uncontrolled pedestrian crossing facilities with dropped kerbs which incorporate tactile paving. Visibility from both crossing points towards Cotham Grove is restricted by the crest of the hill. To the rear of the adopted highway, both corners have third party high boundaries which restrict views along Archfield Road. There are double yellow lines on both sides of the carriageway at the junction. On the opposite side of Archfield Road is the junction with Pitch Lane, which is an extremely narrow and cannot be used by motorised vehicles apart from those accessing a

number of garages located along its length and Poppy Lane, a private lane. A narrow footway runs along must of the carriageway and there are double yellow lines on both sides.

As with the junction with Cotham Grove, due to both corners having third party high boundaries views along Archfield Road are restricted. Pitch Lane is primarily used by pedestrians, in particular pupils walking to and from Cotham School. This is signified by the presence of two wig wags (lights warning of children likely to be crossing the road on their way to and from school) accompanied by children going to or from school traffic signs and plates. All of the roads are subject to a 20mph speed limit and are located within Cotham Residents Parking Scheme. There are a series of marked on-street pay and display parking bays which operate Monday to Friday from 9am to 5pm. They can be used all day by residents or for a maximum of three hours by visitors. Adjacent to the junction with Pitch Lane is Archfield House Nursery outside of which is a keep clear white line. This road marking advises that this section of highway should be kept clear of stationary vehicles. To date there have been no recorded accidents within the vicinity of the site.

Plan Showing On-street Parking Bays Within Immediate Vicinity of the Site



Uncontrolled Pedestrian Crossing

The need for improved pedestrian crossing facilities at this location was first raised by local residents. It was subsequently examined by the **Bishopston, Cotham and Redland**

Neighbourhood Partnership Transport Sub-Group in 2014 for whom a report was produced by the Highway Authorities Area Engineering Team. (See attached document). This consisted of officer comments and recommendations along with a Technical Note written on the 5th of March 2014 by CH2MHILL (now Jacobs) which reviewed the existing situation, accident data, options and indicative costs. Two options were considered:

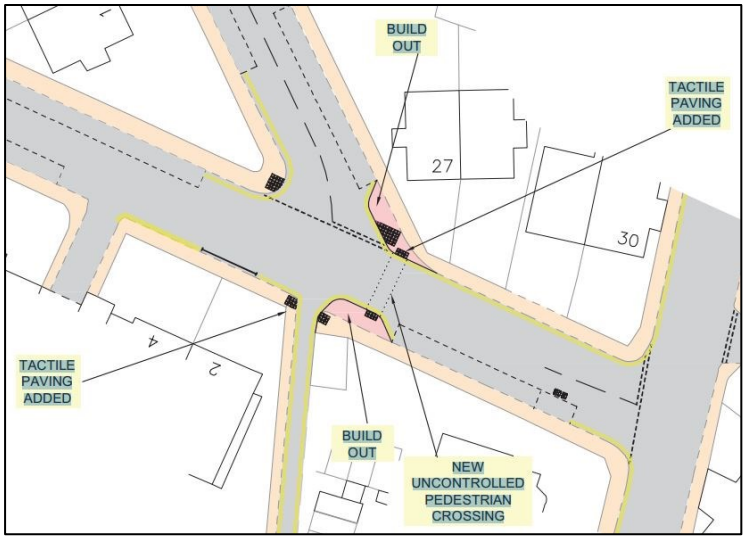
- Option One suggested the implementation of a left turn ban from Archfield Road to be able to provide a build out on the north east side of Cotham Grove. This was not recommended as it would be impossible to enforce and could lead to a false sense of security for pedestrians.
- Option Two suggested the reversal of the junction priorities to aid bus movements from Cotham Brow into Archfield Road and vice versa but highlighted several issues and did not meet visibility requirements.

The report concluded that a revised Option One should be considered in which a build out is introduced on the North West corner. As there was no funding identified to implement the scheme, it was not progressed. However, the need for improved crossing facilities was subsequently raised as part of the Transport Statement for the expansion of Cotham School – 17/04367/FB. This noted that "the junction of Cotham Grove and Archfield Road is considered unsafe to cross. At present, some pupils use Pitch Lane as a more direct shortcut from Cotham Road to Cotham Grove. On-site observations noted that although Pitch Lane is a narrow lane with narrow footways along both sides of the carriageway, the use of this road is restricted to 'access only' to the small number of garages lining the lane for all motor vehicles and the road includes doubles yellow lines along its entire length. As such, Pitch Lane is a suitable walk route for pupils given its limited traffic movements.

Pitch Lane emerges onto Archfield Road directly opposite the wide junction entry at Cotham Grove. Furthermore, due to the broad width of Archfield Road and its close proximity to the nearby junction with Cotham Road, pupils crossing in this location may experience vehicles turning into the road and approaching before they have completed their crossing movement safely. To make pedestrian safety improvements on Archfield Road, it is considered that the introduction of the measures would help to formalise crossing movements into a safe location and offer some degree of protection for pupils who regularly make crossing movements in this location." As a result it was agreed that as part of the highway works package agreed to mitigate the increase in traffic and to improve safety for pedestrians associated with the increase in pupils at the school, improved crossing facilities would be provided.

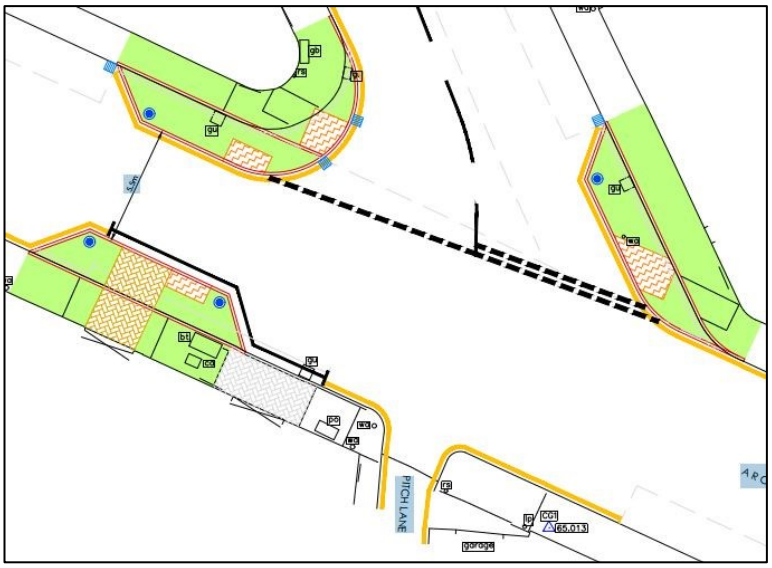
This location was chosen as it had been identified locally as difficult to cross and was on the desire line of pupils crossing to and from the expanded school site. Furthermore the Transport Statement accompanying the original planning application proposed that that build outs would be constructed within the junction of Archfield Road with Cotham Grove and Pitch Lane on the east hand side of the junction, each of which would contain uncontrolled pedestrian crossing facilities with dropped kerbs incorporating tactile paving. The requirement to undertake the works was applied as a Grampian condition to the decision notice. This is because as with most highway schemes, not all of the engineering details can be finalised before permission is given because of timescales. At the time of the planning application Archfield House Nursery were not consulted as they were more remote from the development than the usual planning consultation radius.

Proposed Highway Works Plan Submitted as Part of Planning Application 17/04367/FB



To support the delivery of school places, the council's Area Engineering Team have been undertaking the implementation of the measures secured for most of the new and expanded schools through the planning process. Following the permission being approved and undertaking an in-depth assessment of the above proposals it became apparent that not only were pedestrians choosing to cross the other side of the road but the scheme in this format could not be delivered due to a number of other issues including the camber and drainage of the carriageway. As a result the proposals were redesigned by the Highway Authorities Area Engineering Team as shown in the plan below. In order to seek local residents businesses views the plans were published on the council's Consultation & Engagement Hubs website **www.bristol.citizenspace.com** A significant number of objections were received principally from Archfield Road Nursery and parents who send their children there. Their chief concern was the loss of on-street parking outside of their site, which they defined by the keep clear white line. However, as already stated this road marking is advisory, indicating that the area should be kept clear of stationary vehicles and is not for parking or dropping. Concerns were also raised regarding the placement of the build out in front of the western most vehicle crossover, which is the principal vehicular route for servicing of the site.

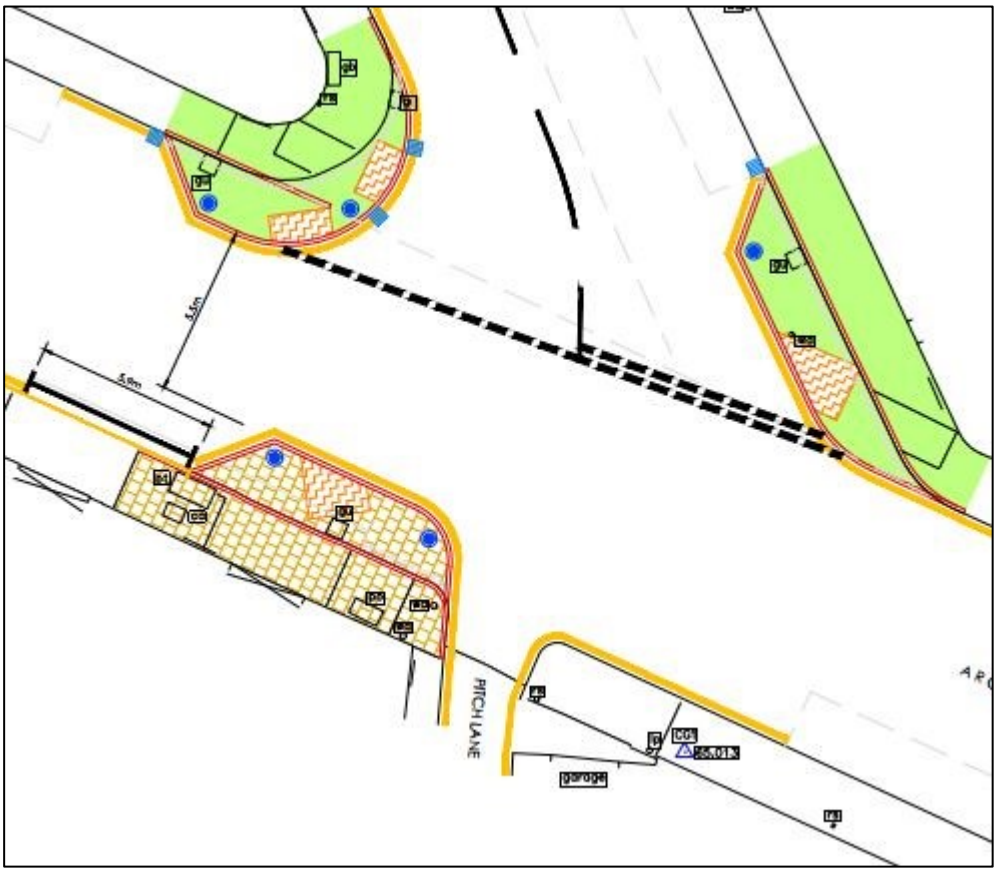
Proposed Preliminary Highway Works Plan Produced by Highway Authority



As a result of these objections further work was undertaken to revise the design. This included carrying out further pedestrian counts on Friday the 25th of January and Wednesday the 30th of January 2019. These further demonstrated that during the am peak (7.45am to 8.45am) on the Friday, 57 pedestrians were observed to cross over from the western footway on Cotham Grove to Archfield Roads southern footway, west of Pitch Lane with 30 pedestrians travelling in the reverse direction during the pm peak (2.30pm to 3.30pm). On the Wednesday during the am peak 33 pedestrian crossed over at the same point with 42 travelling in the reverse direction during the pm peak (2.30pm to 3.30pm). These are significant flows and clearly demonstrate the need for improved pedestrian crossing facilities at this location.

Specifically it was concluded that most pedestrians used the west of Pitch Lane and not east and that the proposed informal crossing consulted upon would be in the best position to cater for pedestrian desire lines. Based on these findings and to take into account the nursery's concerns the proposed preliminary design was amended and the new design subsequently republished on the council's Consultation & Engagement Hubs website.

Revised Highway Works Plan Produced by Highway Authority



Following the plan being published additional objections were received, again primarily from Archfield House Nursery and parents. As with the previous consultation the main concern raised was the loss of on-street parking. However, again the purpose of the advisory marking is that this area should be kept clear of vehicles and should not be used by parents for dropping off/picking up their children. Schools and nurseries often have keep clear markings to prevent parents and other motorists from parking outside. This is to reduce the conflict between vulnerable road users and parked vehicles. Drivers dropping off/picking up children do not have a right to drop or

pick up their children off directly outside the child care provider. It should be noted that when the nursery applied for permission to expand - 15/06271/F – decided 10 June 2016, increasing the number of places from 82 to 102, permission was granted on the basis of the Transport Statement.

This included the following information: "The nursery has advised that 22% of children arrive by car in the morning (18 cars) and 20% are picked up by car in the evening (16 cars)…The nursery also encourage the use of sustainable travel methods with the aim of reducing dependency on single occupancy car…" It also outlined that there was ample on-street parking to accommodate the drop off/collection of children "between nine and 21 on-street parking spaces available within 100 metres walking distance of the site … and a further 23 to 40 on-street parking spaces available within 100 to 200 metres of the site". The nursery demonstrated themselves that there would be ample opportunity to accommodate their parking movements on-street and their own travel planning measures were sufficient to maintain a low level of parking.

Archfield House Nursery have also raised a number of other concerns including whether the design affords sufficient visibility; that it should be subject to a Road Safety Audit; that access should not be prejudiced in the manner proposed and that existing vehicle manoeuvres out of the site will be made more difficult. However, it should be pointed that the scheme was designed by experienced Engineers who are also fully qualified Road Safety Auditors; site visits and a full assessment along with pedestrians counts were undertaken; the installation of the build outs will afford pedestrians improved visibility of oncoming vehicles by enabling them to see past parked cars and will also reduce the distance that they need to cross thereby giving them more confidence when deciding whether it is safe to step out.

It should also be noted access, in particular for the emergency services and deliveries, will not be restricted to either No 2 or No 4 Archfield Road with vehicles still being able to access the existing on-site parking bays at No 4, as shown in the proposed site layout plan submitted as part of the nursery's previous application - 15/06271/F; that there is ample available on-street parking within the Residents Parking Scheme to accommodate drop off/pick-ups for the nursery; the provision of a widened footway outside the site supports the Archfield House Nursery's stance on encouraging sustainable travel methods by improving crossing facilities for all and the requirement to provide a scheme to improve pedestrian safety and reduce conflict at a location identified locally as problematic and that whilst there have been no recorded accidents at the site, the need to address safety concerns is fully justified by the ongoing road safety requirement to reduce citywide accidents involving child pedestrians as demonstrated by the table below.

The following data shows the number of child accidents in Bristol and was provided by the Highway Authorities Road Casualty Statistics Officer and was taken from the AccsMap - Accident Analysis System for the period 1st of February 2017 to the 31st of January 2020.

Year	Fatal	Serious	Slight	Total
2017	0	1	31	32
2018	1	3	33	37
2019	0	2	25	27
2020	0	0	1	1

It is also in line with the following council policies/documents which seek to improve road safety

by providing safer streets and encouraging the use of sustainable travel in order to reduce the impact of the private car.

Bristol Transport Strategy - Adopted 2019

- Outcome 5 - Walking to be safe, pleasant, accessible and the first choice for local journeys and combined with public transport for longer journeys;
- Outcome 8 - More people making sustainable and healthy transport choices by improving engagement with communities, schools and businesses.
- Walking and cycling can increase levels of physical activity and reduce air pollution but our citizens have to feel safe on our streets to do this.
- Make walking safe - Implement measures to ensure pedestrians are safe and feel safe. Key issues include footpath design and repairs, lighting, safe crossings, reducing conflict with other road users, air and noise pollution.

Bristol Development Framework Core Strategy – Policies – Adopted June 2011 - Policy BCS10: Transport and Access Improvements

- Proposals should minimise the need to travel, especially by private car, and maximise opportunities for the use of walking, cycling and public transport.
- Developments should be designed and located to ensure the provision of safe streets and reduce as far as possible the negative impacts of vehicles such as excessive volumes, fumes and noise. Proposals should create places and streets where traffic and other activities are integrated and where buildings, spaces and the needs of people shape the area.

Bristol Local Plan – Site Allocations and Development Management Policies – Adopted July 2014 - Policy DM23: Transport Development Management

- Development should not give rise to unacceptable traffic conditions and will be expected to provide: iv. For pedestrians and cyclists, including, where appropriate, enhancing the pedestrian and cycle network.

Recommendations

To summarise, the scheme involves the reallocation of the adopted highway from an informal drop off space used at the start and end of the nursery day, to a measure which creates additional space for pedestrians at all times, aids crossing movements for all, including children from the nursery and draws from a safety concern identified by the Neighbourhood Partnership. It must be noted that the keep clear marking should not be used for this purpose, especially when taking into consideration the availability of on-street parking as set out within Archfield Road Nursery's Transport Statement as submitted as part of the planning application for their expansion. The scheme has been re-designed by experienced Engineers who are all qualified Road Safety Auditors. Site visits, pedestrian counts and a full assessment were undertaken which took into consideration the needs of pedestrians particularly those with impairments. TDM judges the need to address road safety concerns at this location are paramount and are fully supported by the council's approach to reduce child pedestrian accidents and are in line with policy requirements. On this basis TDM recommends that the proposals be approved.

Conditions

B1B Approval of road works necessary

No offsite highway works as proposed under the application shall take place until a general arrangement plan(s) to a scale of 1:200 showing the following works to the adopted highway has been submitted to and approved in writing by the Local Planning Authority.

- Construction of kerb build outs with dropped kerbs incorporating tactile paving and bollards as shown in plan E17047-02-A at the junction between Archfield Road, Cotham Grove and Pitch Lane.

Where applicable indicating proposals for:

- Existing levels of the finished highway tying into building threshold levels
- Alterations to waiting restrictions or other Traffic Regulation Orders to enable the works
- Signing, street furniture, street trees and pits
- Structures on or adjacent to the highway
- Extent of any stopping up, diversion or dedication of new highway (including all public rights of way shown on the definitive map and statement)

No development shall take place over the route of any public right of way prior to the confirmation of a Town & Country Planning Act 1990 path diversion/stopping up order.

Reason: In the interests of public safety and to ensure that all road works associated with the proposed development are: planned; approved in good time (including any statutory processes); undertaken to a standard approved by the Local Planning Authority.

Advices

I024A) Works on the Public Highway
I026A) Traffic Regulation Order (TRO)
I043A) Impact on the highway network during construction
I053) Excavation Works on the Adopted Highway

Development Control Committee B – 8 November 2017
Application No. 17/04367/FB : Cotham School Cotham Lawn Road Bristol BS6 6DT

SUMMARY AND BACKGROUND

This application for planning permission (application reference 17/04367/FB) brought before Committee has been made by the Council's Education Capital Team seeking consent for the construction of a two storey building to accommodate 12 classrooms, a dining hall and meeting rooms. The works proposed under this application also include repositioning the artificial grass all-weather pitch and enclosure, previously approved by the Committee (ref 16/01156/F).

At the time of writing 78 representations were received in total following public consultation from residents and amenity groups, 33 in opposition to the scheme, 43 in support and 2 neutral comments. The responses include an objection from the Redland and Cotham Amenities Society who object to the elevational treatment of the proposed building. The application has not been referred to Committee by any Councillor, but due to the level of public interest it is considered appropriate for this application to come before Committee.

Following officer advice and the submission of additional information including a Landscape Masterplan, updated Construction Management Plan and Sustainability Strategy, officers are satisfied that the proposals would be acceptable and in accordance with local and national planning policy (subject to a number of conditions if permission were to be forthcoming).

In making a recommendation to the Committee on the proposals, officers have recognised the need to ensure there are sufficient school places in Bristol to meet the demand. On the basis of all of the material considerations related to this application, approval of the application is recommended to Members, subject to conditions.

SITE DESCRIPTION

The application site relates to Cotham Secondary School specifically upon a section of the existing staff car park. The main, frontage school buildings are locally listed and the site is located within the Cotham and Redland Conservation Area. There are a number of Grade II Listed buildings surrounding the site and the site is also located in close proximity to the Grade II* Western College to the South West of the site.

The school has 1080 pupils (excluding 6th form) on roll and is an 11-19 comprehensive school catering for students at secondary and 6th form level. The sixth form provision is federated with the post 16 centre known as Redland Green 16-19 which is situated on a separate site as part of the North Bristol post 16 centre.

Cotham School is surrounded by dwelling houses on all sides. However the nearest residential property to the application site is number 27 Cotham Lawn Road to the North East of the application site. This building was formerly the headmaster's office and is adjacent to the old caretaker's house which is still used in connection with the school. This building is immediately north of the proposed building. To the west of the application site are the existing school buildings and to the south is the location of the approved all weather pitch.

RELEVANT PLANNING HISTORY

There is an extensive planning history relating to the school and associated tree and boundary works applications. The most relevant applications to the current submission are as follows: -

16/01156/F- Installation of an artificial all-weather playing surface on the school field, enclosed by 3m high fence. GRANTED at committee, 30th August 2016

08/03457/FB - Extensive refurbishment and replacement of substandard accommodation through extension to the existing school with related landscape works. GRANTED 10th November 2008,

08/03458/LC - Demolition works in connection with extensive refurbishment and replacement of substandard accommodation through extension to the existing school with related landscape works. GRANTED 1st December 2008,

10/03337/F - Proposed construction of new MUGA (Multi-Use Games Area), fencing, associated landscaping. GRANTED 6th December 2010, and

14/06081/F - 4no. classroom extension, associated circulation space and staff office (existing changing facilities within internal courtyard of the school to be demolished). GRANTED 5th February 2015.

Please note that it is understood that works approved under applications 16/01156/F and 14/06081/F have not been carried out. The all-weather pitch (AWP) is being relocated and sized to accommodate the new building. The 4 additional classrooms are being incorporated within the proposed new building.

EQUALITIES ASSESSMENT

During the determination of this application due regard has been given to the impact of this scheme in relation to the Equalities Act 2010 in terms of its impact upon key equalities protected characteristics. These characteristics are age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. There is no indication or evidence (including from consultation with relevant groups) that different groups have or would have different needs, experiences, issues and priorities in relation this particular proposed development. Overall, it is considered that the refusal of this application would not have any significant adverse impact upon different groups or implications for the Equalities Act 2010.

APPLICATION

The works proposed under this application include the construction of a two storey building to accommodate 12 classrooms, a dining hall and meeting rooms. The gross internal floor area of the proposed two storey building is 1123 square metres. The expansion of the school comes as a result of the need to provide more secondary school places. The additional classrooms in this instance would result in 135 more school places.

The application also proposes to reposition the approved all-weather-pitch (AWP) on the existing playing field, situated adjacent to the existing Multi-Use Games Area (MUGA). The AWP is being repositioned further away from residential properties at numbers 13-23 Cotham Park and includes an enclosing metal fence (and gates), which is 3m in height. The playing surface of the pitch would be made from green coloured artificial grass (3G style surface).

PRE APPLICATION COMMUNITY INVOLVEMENT

i) Process

The pre-application consultation that took place in this case involved two open consultations in the main hall at Cotham School where residents and the local and school communities were notified by letter drops, website and school notices. Consultation boards of the scheme were displayed and feedback was also recorded. There were 14 attendees and 5 comment sheets received.

The feedback received was supportive of the design and position of the building and there was an

acceptance of the need for additional secondary school places. A summary of the concerns raised are as follows:

Concerns about the displacement of the trees
Concern that there was no definitive landscaping scheme
Concerns relating to noise from the all-weather pitch and temporary car parking
Concerns relating to light pollution
Concerns about the loss of a play area
Concerns relating to the temporary parking

ii) Fundamental Outcomes

Following the consultation the following amendments have been made to the proposal:

- An Arboricultural Impact Assessment has been prepared
- A Landscape Masterplan has been prepared
- Tree planting is proposed which helps to screen the all-weather pitch
- Restricted hours are proposed for use of the all-weather pitch
- The all-weather pitch has been repositioned further away from neighbouring properties
- Localised pavement improvements are proposed

Please note: The temporary parking whilst originally considered is not proposed under this application.

The Redland and Cotham Amenity Society (RCAS) were also invited to a meeting to discuss the proposals for the expansion of the school. It was agreed that the location for the building was the most appropriate however RCAS did set out concerns that the school was overdeveloped and suggested more trees along the Cotham Lawn Road frontage. The elevational treatment of the proposed building was also discussed. It is noted that RCAS object to the elevational detail of the proposed building under this application.

RESPONSE TO PUBLICITY AND CONSULTATION

The application was advertised via a press and site notice between 17.08.2017 and 13.09.2017. 63 neighbouring premises were also directly consulted by neighbour notification letter with an expiry date 07.09.2017.

Additional information was received over the course of this planning application and this has undergone a 14 day consultation. The 14 day consultation on revised plan expires on 06/11/2017 and therefore any further representations will be included on the amendments sheet, prior to planning Committee.

At the time of writing, 78 representations have been received in total, comprising of 43 support comments and 33 objection comments.

In addition an objection has also been received by the Redland and Cotham Amenity Society. These comments are set out in full under heading 'Other Comments'.

Representations are addressed by officers below or within the body of this Committee report. Representations received are summarized below:

Support comments:

The proposed development will result in more needed secondary school spaces.

The design of the building is good. The building will have a low impact and is in character with the surrounding area.

The proposal encourages travel to school by more sustainable and more economic modes of travel.

The expansion of the school provides places for local children.

There is sufficient space on the site for the proposed building.

The proposal supports the effective use of public money taking advantage of the economies of scale available through school expansion rather than the considerable additional costs of building new schools.

The proposal will support lower income families by minimising travel costs.

An extension to the school would serve families in local community.

Adequate green space would be left after the proposal.

The benefits of the providing additional school places for local children far outweigh any drawbacks.

Objection comments:

The proposed development would obstruct and not retain important views.

Case Officer Response: Whilst the loss of a view is also not a material planning matter, the Cotham and Redland Character Appraisal (2011) sets out that there is 'a general leafy character, given by the clear views into private gardens e.g. views into Muller House's gardens from Hartfield Avenue, and the playing fields of Cotham School.' There is space between the side of the proposed building and adjacent buildings allowing views through to the schools playing fields. The replanting of trees on site should also ensure that the site remains 'leafy'. For these reasons the case isn't considered to result in any detrimental harm in this regard.

The proposed development would result in the further loss of green space.

Case Officer Response: The proposed location of the building minimises the loss of green space as it is sited predominantly on the existing school car park.

The proposed development would result in overshadowing.
The proposal would overshadow vegetation in neighbouring gardens.
The proposed development would result in a loss of privacy.
The proposal would result in noise and disturbance both from numbers of pupils and air conditioning plant equipment.
Hours of use of the weather pitch need to be restricted.

Case Officer Response: Please see Key Issue D of this Committee report.

The proposed development will result in the loss of trees.
Adequate mitigation for the loss of trees has not been demonstrated.
The development is likely to impact on a tree in the garden of number 27 Cotham Lawn Road.
There is no wildlife impact assessment/environmental report.

Case Officer Response: Following Case officer advice a landscaping masterplan has been incorporated into the scheme to provide localised screening, tree replacement and general ecological improvements. A revised Arboricultural Impact Assessment has also been submitted and this includes

trees within number 27 Cotham Lawn Roads garden, tree protection measures and the no dig construction to the car park. An ecology report has been submitted. Please see Key Issue G of this Committee report.

The proposed works result in the overdevelopment of the site.
The proposed works do not preserve the conservation area.
The proposed fencing around the pitch is an eyesore.
A one storey building would be preferable to not detract from the locally listed Cotham school frontage.
The roofline would appear incongruous.
The proposed materials are inappropriate.
The proposed building is unattractive and doesn't integrate with the main school.

Case Officer Response: Please see Key Issue C of this Committee report.

Alternative sites for the building have not been considered in enough detail.
Open space which is locally important should be protected by development.
No evidence is offered about the rising demand of school places and whether this is a temporary demand or a continuing demographic trend.
There is no compelling need for school expansion.
There is no need for an all-weather pitch.
Less outside space/ grass for children to play on.
The proposed single building could be divided into smaller buildings and more easily accommodated on this constrained site.
Primary schools use the outside green space for sports day. This will no longer be possible.

Case Officer Response: Please see Key Issue A of this Committee report.

Traffic and access issues.
The increase in movement will result in a road traffic accident.
There are no proposals to improve the routes to/from school.

Case Officer Response: Please see Key Issue B of this Committee report.

Drainage needs to be reviewed more closely.

Case Officer Response: Please see Key Issue F of this Committee report. A drainage strategy has been submitted with this application.

No details of solar panels.

Case Officer Response: Please see Key Issue G of this Committee report. A sustainability strategy has been submitted. The solar panels are also illustrated on the proposed roof plan.
The school haven't abided by the conditions attached to previous applications.

Case Officer Response: Previous permissions have not been carried out and subsequently the conditions have not been dealt with.

The support comments have been made by people that don't live directly by the site

Case Officer Response: The Local Planning Authority has a duty to assess all representations received whether or not they live near to the site. Anyone has the right to comment on a planning application.

Construction noise will be disruptive

Case Officer Response: A Construction Management Plan has been submitted and is attached as a condition.

The "no dig" approach to some of the car-park expansion leaves neighbours at risk of pollution not being captured in the proposed interceptors fitted to the car-park drainage. There is a serious risk of petrol, diesel and oil that inevitably leaks from parked cars causing an environmental hazard to neighbours. The fact that interceptors are proposed to capture this pollution from the main car park shows there is a need to also incorporate capturing the pollutants from the cellular system to be used in the two new spaces in the old caretakers house garden.

Case Officer Response: It is proposed to install a cut-off channel drain at the edge of the existing car park (hardstanding) at the bottom of the slope. Given this and the extent of the no dig area referenced on the tree protection plan 171020-1.4-CSEX-TPP-NC at no point should any drainage infiltrate the soil and harm neighbouring amenity.

General comments:

Is there provision for a temporary car park?

Case Officer Response: This was considered at pre application stage although is not proposed under this application.

Has a roof garden or living walls been considered?

Case Officer Response: The provision of a living roof was recommended to provide a habitat for wildlife. The developer has advised that the provision of such a roof would make the scheme unviable as a result of time constraints and cost.

There are no notices around the site about the development.
The new plans uploaded including a landscaping plan have not been consulted on.

Case Officer Response: There was a site and press notice as part of the assessment of the application with an expiry date of 13.09.2017. 63 individual neighbour notification letters were also sent out as part of the assessment of the application. All neighbours and representatives are being consulted on all further submitted documentation for a further 14 days.

OTHER COMMENTS

Redland and Cotham Amenities Society:

"The Society notes the requirement for additional classrooms, while regretting yet more building on what remains of a reasonably spacious educational environment. We agree that the location chosen is the least damaging in this respect.

We object to the elevational treatment of the Dining and Meeting element of the new building. The steeply pitched metal clad gable is visually intrusive and inappropriate in relation to the adjacent and original school building and the street scene in the Conservation Area.

We point out that the adjacent Cotham School building in Cotham Lawn Road is designated a Landmark Building and an unlisted Building of Merit in the Cotham and Redland Conservation Area Character Appraisal.

We submit that the hipped roof option for this part of the building, as indicated on the display boards at the public consultation, would be preferable. This would reduce the visual impact of the

development and be in sympathy with the hipped roof of the main school building. The reduced building volume could also be less costly.

We would prefer the use of brick to the standing seam metal that is indicated for this wall, which is not a material appearing elsewhere in this street, and generally inappropriate in the Conservation Area."

Landscape Officer and Arboriculturist:

The Landscape Officer and Arboriculturist requested a: Landscape Masterplan; updated Arboricultural Impact Assessment; full tree planting proposals and tree protection measures, including for the trees in the garden of number 27 Cotham Lawn Road. The Landscape Officer has also requested that trees are replaced on site and not via a contribution.

Of the thirteen trees calculated, to be replaced under the Bristol Tree Replacement Standard, three will be relocated within the site leaving a requirement of ten replacement trees. Three small trees are proposed to be planted along the rear boundary of dwellings 13-23 Cotham Park. While these are small species that will not provide much in terms of amenity value they need to be relatively small as not to dominate the rear gardens of these properties. These are accepted. This leaves the seven trees to be replaced. The use of Prunus Laurocerasus as hedge planting around the new all-weather pitch is a shrub and is not acceptable in terms of provision of suitable replacement tree planting. Subsequently the landscape plan has been further revised to include 4 holly and 5 field maple trees. On receipt of the additional information requested no objections have been raised subject to conditions.

Nature Conservation Officer:

Trees and shrubs are likely to be removed or moved as part of this proposal. All species of wild birds, their eggs, nests and chicks are legally protected until the young have fledged.

Conditions recommended relate to a ten year landscape and nature conservation management plan as well as no clearance of vegetation.

In accordance with Policy DM29 in the Local Plan, the provision of a living (green/brown) roof is recommended to provide habitat for wildlife. Policy DM29 states that 'proposals for new buildings will be expected to incorporate opportunities for green infrastructure such as green roofs, green walls and green decks.' Living roofs can be integrated with photovoltaic panels and also contribute towards Sustainable Urban Drainage Systems (SuDS). Living roofs can be provided on buildings, as well as on bin stores and cycle shelters. The following guidance applies. The roof should be covered with local low-nutrient status aggregates (not topsoil) and no nutrients added. Ideally aggregates should be dominated by gravels with 10 - 20% of sands. On top of this there should be varying depths of sterilised sandy loam between 0 - 3 cm deep. An overall substrate depth of at least 10 cm of crushed demolition aggregate or pure crushed brick is desirable. The roof should include areas of bare ground and not be entirely seeded (to allow wild plants to colonise) and not employ Sedum (stonecrop) because this has limited benefits for wildlife. To benefit certain invertebrates the roof should include local substrates, stones, shingle and gravel with troughs and mounds, piles of pure sand 20 - 30 cm deep for solitary bees and wasps to nest in, small logs, coils of rope and log piles of dry dead wood to provide invertebrate niches (the use of egg-sized pebbles should be avoided because gulls and crows may pick the pebbles up and drop them). Deeper areas of substrate which are at least 20 cm deep are valuable to provide refuges for animals during dry spells. An area of wildflower meadow can also be seeded on the roof for pollinating insects. Please see www.thegreenroofcentre.co.uk and http://livingroofs.org/ for further information and the following reference: English Nature (2006). Living roofs. ISBN 1 85716 934.4

Contaminated Land Officer:

The proposed development is sensitive to contamination and is not situated on or adjacent to land which has been subject to land uses which could be a potential source of contamination. In 2008 some of the school site was subject to assessment, this area was not found to require remediation however screening criteria has changed since this time and the area of the current application was not the focus of the intrusive investigation. Radon protection was deemed as required as part of the build and is likely to be required for this one.
As this is a major application a minimum of a phase 1 desk study looking into contamination must be submitted to the local planning authority. If any information is already prepared we welcome submission prior to determination to reduce the burden of pre-commencement conditions.

If not available we recommend the standard conditions B11, B12, B13 and C1 are applied to any future planning consent.

City Design Team and Conservation Officer:

No objection. Would like to see the use of zinc rather than zinc effect.

Pollution Control:

The all-weather pitch is only slightly repositioned. Its repositioning as shown in the Design and Access Statement will not have a significant effect on any noise from the all-weather pitch.

The all-weather pitch was granted under 16/01156/F with a condition requiring the submission of an acoustic report. It is therefore not appropriate to comment further on the all-weather pitch as its use has already been approved under 16/01156/F. If Committee are minded to approve the application all relevant conditions attached to the approved 16/01156/F should be reattached.
With regards to the erection of a two storey building providing an additional 12 classrooms, dining and meeting rooms plus utilities, an acoustic report has been submitted with the application and this deals with both internal noise levels within the classrooms and gives noise limits for any ventilation or air conditioning plant to be provided at the building.

In order to achieve the necessary internal noise levels within the classroom the report recommends that the classroom will need to be double glazed and ventilation provided. It is therefore not considered that noise from within the classrooms would not be disturbing to neighbouring properties.

The plant noise limits given for that plant noise level does not exceed background noise level at each receptor. The report gives maximum plant noise levels which have been calculated using levels of background noise measured at the closest residential properties to the proposed development. Plant levels have been calculated to ensure that plant noise level does not exceed background noise levels at the closest residential properties. To ensure there is no increase in noise levels from such plant, a condition is recommended setting out that plant noise is at least 5 dB below the existing background noise level.

There should be any adverse impact from the use of the classrooms themselves and noise from plant can be controlled through compliance with a plant noise condition.

The provision of extra classrooms is to enable the school to take on an extra 135 pupils, increasing the numbers of pupils at the school from 1284 to 1419. Whilst an increase in pupil numbers will be likely to lead to an increase in noise levels created at the school it is difficult to show any noticeable increase in overall noise levels with pupil numbers increasing from 1284 to 1419. 1284 pupils could make a significant level of noise and this level would only marginally increase with an extra 135 pupils.

No objection subject to conditions:

Transport Development Management:

Property History

The site is located in a dense residential area with good accessibility by foot and public transport.

The site operates already as a school.

Trip Generation

Congestion is experienced during school peak times. This dissipates relatively quickly. 19% of pupils are currently driven to school (this is a figure which does not take into account pupils sharing vehicles).

Should this travel pattern continue, it is has been calculated that that an additional 47 pupils will be driven to school. This could be an additional 47 vehicles arriving at peak times.

It is clear that the increase in movements will have an impact on the surrounding streets. However, Central Government policy requires a presumption in favour of the provision of educational establishments unless a severe impact can be clearly demonstrated. It is not considered that this increase will lead to a severe impact, subject to the measures proposed being put into place.

Local Conditions

The site is relatively accessible, being near to public transport corridors and a rail station. Pupils are generally from a local catchment area, many living within appropriate walking and cycling distances for a school. It is possible to reduce the number of children being driven to the school through the use of an updated School Travel Plan. Whilst assessing the predicted increase in traffic, it has been assumed that this will be directly proportionate to current travel patterns. The outcome of School Travel Planning measures and any associated reduction in vehicle trips has not been included, but is likely to reduce these trips. A condition can secure a School Travel Plan.

Mitigation

To encourage the better use of walking and cycling to the school it is imperative that there is a secure and safe feeling walking environment in the streets around the school. Whilst the lack of facilities might not directly give rise to an accident record, the perception of a lack of safety can dissuade parents to allow their children to use more active travel modes, thus increasing car use and associated additional conflicts, as well as losing the health benefits of active travel. It is therefore expected that a school expansion would provide for an improved pedestrian environment to mitigate against this.

The application package is accompanied by proposals to improve the infrastructure in the vicinity of the school - by a contribution to improve the conspicuousness of the existing pedestrian crossing in Hampton Road, and to undertake minor crossing improvements at Archfield Road with its junction with Cotham Grove. This may require alterations to a Traffic Regulation Order, which would require a contribution of £5395. Both of these measures are welcomed and address concerns raised at the pre-application stage. These works can be included as a highway condition and secured, along with the contribution, within a Memorandum of Understanding between departments.

Access

The existing accesses are to be retained. There is no objection to this. Further information about how deliveries to the new block will be managed, as there is insufficient space to turn near to the new block, which is where many of the deliveries will now take place. Further information is required. It is considered that this can be secured by a condition.

Car Parking

The current car park allows for around 50 parking spaces. The proposals alter the layout of this car park, and 39 parking spaces will remain, resulting in the loss of 11 spaces. There are some objections to the loss of parking from residents. It should be noted that as the school is within the Residents Parking Scheme, there are controls on on-street parking. The school will only be eligible for the same limited number of on-street permits as at present (6). Therefore there should be no discernible impact on-street over and above the existing.

This will, however, require staff to travel more sustainably as there will be less supply of parking availability. This will need to be encompassed within a School Travel Plan. Staff travel is often overlooked within School Travel Planning. This can be incorporated within the School Travel Plan condition.

Cycle Parking

There are currently 80 student cycle parking spaces, and 60 staff cycle parking spaces, as well as 12 visitors' cycle parking spaces.

The cycle parking proposals fall below the minimum cycle parking standard apart from the staff provision. The applicants cite the relatively low level of cycling currently taking place (5% of students). The cycle parking requirement of 1 per 5 pupils reflects the Council's objectives to significantly increase cycling, as reflected through the Council's active travel policies. It is also likely that the low level of cycling is also due to an outdated and insufficient School Travel Plan which contains no promotion of cycling to school for staff or pupils.

Visitors' cycle parking could easily be accommodated through the provision of an additional 2 Sheffield Stands. The current staff cycle parking could be used by students, with a smaller shelter provided for staff, and additional cycle shelters provided. The existing cycle shelter is to be repositioned - further information about where this is to be relocated to is also required.

It is essential that cycle parking is provided to an adequate standard. Further details should be secured by a condition.

Deliveries and Servicing

The refuse store is to be relocated, although it appears that there is no proposal to alter the refuse collection arrangements. Servicing and deliveries will take place as at present.

School Travel Plan

The submitted School Travel Plan is outdated and does not include any staff school travel initiatives. It would be expected that the School Travel Plan is updated to reflect BCC's current Travel Plan requirements, and to include staff travel as outlined above. Initiatives for staff could include car sharing, changing facilities, showers and lockers for staff travelling by bicycle / walking in wet weather, alterations to marking systems to reduce the need for staff to carry large amounts of marking, cycle vouchers or many more. Further advice can be sought from the Council's Sustainable Transport Team.

The school Travel Plan would be secured by a pre-occupation condition. This would be submitted through ModeShift Stars using the Interim STP template. The school is advised to follow this process:

"To register - please ask the School Travel Champion to visit https://modeshiftstars.org/ to register (select - your role>school>school travel plan champion, fill out the details in the drop down list and create a password).

Under the resources page they will find the information to support the application. The school will need to fill in the "Interim STP" form and the "School Travel Plans and the Planning Process Guidance Document" will assist in doing this."

Construction Management

A Construction Management Plan to mitigate conditions on the public highway arising from the construction, including a restriction on deliveries and large vehicles accessing the site during the start and end of the school day. This could be secured by a pre-commencement condition.

Suggested conditions and informatives to follow.

Sustainable Cities Team:

Given the proposed development's proximity to the emerging proposals for a heat network in this area, and as it is in the heat priority area (as defined by BCS14), the development needs to include infrastructure to enable it to connect to a district heating network in the future.
As such the applicant must confirm that the heating system is a single communal heating system as opposed to multiple gas boilers serving different parts of the development proposal. The applicant must also confirm that the following will be met

- Provision of a single plant room, located adjacent to the planned heat network route, producing all hot water, including engineering measures to facilitate the connection of an interfacing heat exchanger;
- Space identified for the heat exchanger;
- Provisions made in the building fabric such as soft-points in the building walls to allow pipes to be routed through from the outside to a later date; and
- External pipework routes identified and safeguarded
- Heat delivery, distribution and control systems that are designed to achieve low return temperatures, and that these services are designed in accordance with current CIBSE guidance on connection to district heating (please refer to Heat networks: Code of Practice for the UK, CP1, 2015, CIBSE).

Confirmation that there is a commitment to meeting BREEAM excellent is also required.

The proposals to meet the rest of BCS14 requirements (i.e. energy efficient design and renewable energy) are broadly acceptable subject to conditions to secure construction in accordance with the proposals.

BCS13 & BCS15

The climate mitigation, adaptation and sustainable design and construction measures proposed are acceptable. The inclusion of external shading (brise soleil) to control solar gains during summer and reduce risk of overheating is welcomed as a climate adaptation measure. The conditions below should be applied to secure construction in accordance with the proposals

Confirmation of the above points has been received confirming there is a communal heating system

(providing a single point of connection to heat network) and sufficient room in the plant roof to facilitate a connection to the heat network at a future date.

A condition and advisory note reference the heat network connection should still applied to secure more detailed information.

A condition securing a BREEAM excellent strategy is also attached.

Sports England:

Sport England did not raise an objection to the proposed development granted permission under app ref: 16/01156/F on the basis it was considered to meet our E5 exception policy, which states:

E5 - The proposed development is for an indoor or outdoor sports facility, the provision of which would be of sufficient benefit to the development of sport as to outweigh the detriment caused by the loss of the playing field or playing fields. Sport England recommended the following condition be attached to the decision notice should the local planning authority be minded to approve the application. (See Community Use Agreement condition)

Having reviewed the proposed site plans, Sport England does not consider there is any additional or material impact on the playing field or its ability to accommodate a range of playing pitches and/or sport arising from the repositioning of the all-weather pitch. On that basis, Sport England wishes to maintain its position of support for the proposal and recommends the attachment of the above condition (1) in relation to the implementation of a community use agreement.

Flood Risk Technician:

The proposed drainage strategy is acceptable, no further comments

Bristol Waste:

No comment as no residential component.

RELEVANT POLICIES

National Planning Policy Framework – March 2012
Bristol Local Plan comprising Core Strategy (Adopted June 2011), Site Allocations and Development Management Policies (Adopted July 2014) and (as appropriate) the Bristol Central Area Plan (Adopted March 2015) and (as appropriate) the Old Market Quarter Neighbourhood Development Plan 2016 and Lawrence Weston Neighbourhood Development Plan 2017.

In determining this application, the Local Planning Authority has had regard to all relevant policies of the Bristol Local Plan and relevant guidance.

KEY ISSUES

The all-weather pitch is only slightly repositioned since its approval at Committee under application 16/01156/F. The revised position of the pitch would not have a significant effect on any noise or any other amenity issues above that already approved. Sport England were consulted and have raised no objections to the movement of the approved pitch. The pitch is positioned further away from residential properties at numbers 13-23 Cotham Park than that previously approved.

The all-weather pitch was granted with a condition requiring the submission of an acoustic report. Were Committee minded to approve the application any conditions relating to the all-weather pitch would be reattached. Given there is an approved application (16/01156/F) for the all-weather pitch, which is a live permission, this Committee report will focus on the construction of the two storey building to accommodate 12 classrooms, dining area and meeting rooms.

A) IS THE PRINCIPLE OF THE DEVELOPMENT ACCEPTABLE?

The application site (Cotham School) is identified as an area of Designated Important Open Space as defined within the Policies Map associated within the Council's Site Allocations and Development Management Polices Local Plan (2014). Policy DM17 in this document states that development on part, or all of an important open space as designated will not be permitted unless the development is ancillary to the open space use. Policy BCS9 of the Bristol Development Framework Core Strategy (2011) is also applicable, and states that the integrity and connectivity of the strategic green infrastructure network should be maintained, protected and enhanced. Open spaces which are important for recreation, leisure and community, townscape and landscape quality and visual amenity should be protected.

Paragraph 72 of the National Planning Policy Framework (NPPF) requests that Local Planning Authorities give great weight to the need to create, expand or alter schools; and work with school promoters to identify and resolve key planning issues before applications are submitted.

Policy BCS12 of the Bristol Core Strategy states that community facilities should be located where there is a choice of travel options and should be accessible to all members of the community. Where possible facilities should be located within existing centres (the site is located to the within walking distance of Whiteladies Road designated centre and just outside of the central area as defined in the Bristol Central Area Plan Policies Map, adopted March 2015), and the school is a well-established secondary school.

The proposed development would provide a new school building to accommodate additional pupils at the school. This is to meet an identified local demand for school places as a result of an increase in children starting secondary school over the last few years, and which is projected to increase over the next few years. In respect of this, the Council's Place Planning Manager, Children and Young People's Services has advised as follows:

"Bristol has experienced considerable growth in demand for primary school places in recent years. A large number of schools were expanded and new primary schools opened to meet this demand. The increased numbers of pupils is now starting to move into the secondary sector.

The north of the city experienced some of the highest growth in pupil numbers and this is already putting considerable pressure on secondary school places. On national offer day for year 7 places in 2017, there were no unfilled places across the whole of north Bristol and to ensure all pupils were allocated a place a number of schools had to offer additional places. Fairfield and Orchard Schools taking above their Planned Admission Number (PAN). Although a popular school, accommodation at Cotham is unable to cope with additional pupils without physical expansion of the school buildings.

Detailed pupil projections have been developed in order to forecast the demand for school places across the city. These projections show that demand for secondary school places will continue to rise in every part of the city. The Department for Education has already recognised the future shortfall of places and is commissioning 3 new free schools to assist in meeting its forecast demand. Although one of these schools is due to be located in north Bristol, this will not be sufficient to meet all the anticipated demand. To acknowledge the requirement for further places the Government has also provided 'Basic Need' funding which is provided to assist the council to meet the additional need.

Projections for the north area, including the planned expansion of Cotham, together with expansions of Bristol Cathedral, Bristol Free School, Redland Green and St Bedes and the new free school, show that the area will have just enough places for 2018 and 2019 but will move back to a deficit from 2020.

An additional factor is that there has been very little progress in acquiring a site for the free school intended to serve the east/central area. This is delayed until at least 2020 and may not be possible to deliver at all due to a lack of available and affordable sites. Some of the schools in the north - Cotham, Fairfield and Orchard in particular are very accessible from parts of central and east Bristol. The council therefore fully supports the expansion of Cotham School as an essential part of ensuring the city meets its statutory duty to ensure a sufficient supply of school places."

This site of the new building is currently in ancillary educational use, providing car parking facilities to the staff in the form of 15 parking spaces.

The location of the proposed building has been informed by the lack of availability of appropriate alternative sites around the school. While other sites on the school grounds were considered , as set out in the applicant's design and access statement, these were discounted for various reasons relating to poor access during construction; tree removal; loss of green space; located too far from the existing school. There is also a desire to accommodate the classrooms within one building given this was found to be most cost effective solution which would also reduce the movement of students around the site.

Of the sites suggested the proposed site is set back from the road sufficiently so that it is not in conflict with the existing streetscape elevation. It is closer to both the existing dining and classroom facilities. It is also a brownfield site building on predominantly the existing car park, maintaining green important open space across the site.

In principle, the erection of additional classrooms for education purposes inclusive of dining and meeting rooms is not considered to be unacceptable and will make better use of the site, in accordance with sustainable development principles. It is also noted that the provision will go some way to helping the Council fulfil its statutory obligation to provide sufficient school places.

Whilst the above is noted, the application is subject to assessment against other Development Plan considerations, including highways safety issues; the impact of the proposal on the character of the area and the amenity of neighbouring residents, in addition to ecological, arboricultural and sustainability issues. These issues will be dealt with through the following Key Issues of the report.

B) DOES THE PROPOSAL SATISFACTORY ADDRESS TRANSPORT AND MOVEMENT ISSUES?

Section 4 of the NPPF outlines that Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel.

Policy DM23 (Transport Development Management) of the SADMP outlines that new development should not give rise to unacceptable traffic conditions and will be expected to provide safe access to the highway network. The policy also outlines that new development should be accessible by sustainable transport methods such as walking, cycling and public transport. Furthermore, the policy sets standards for parking provision.

Policy BCS10 (Transport and Access Improvements) of the Core Strategy requires development to minimise the need to travel, especially by private car, and maximise opportunities for the use of more sustainable transport modes. It also requires developments

to ensure safe streets.

The additional accommodation will allow the school to accommodate 135 more pupils. The proposed development will result in an increase of movements, which needs to be considered.

The proposed works are located on an existing staff car park where 11 spaces would be lost. As the Council's parking standards are maximums and the site is in a relatively sustainable location, there is no policy conflict with the loss of on-site car parking.

Transport Development Management were consulted as part of the assessment of this application and have advised that the increase in movements will not lead to a severe impact, subject to some highway measures to improve the walking infrastructure in the vicinity of the school. These include making making a contribution for improvements to the zebra crossing in Hampton Road, and undertaking some minor crossing improvements at Archfield Road with its junction with Cotham Grove.

These improvements have been secured by a Memorandum of Understanding between departments.

There are objections to the loss of parking spaces from residents. However, as the school is within the Residents Parking Scheme, there are controls on on-street parking, which would deter unsafe parking through enforcement. The school has a limited number of parking permits made available to it, and any on-street parking impact is therefore not materially different from the current parking impact.

The proposals result in the loss of parking spaces for staff and subsequently staff will need to travel more sustainably. This will be secured and monitored through a school travel plan, which will be secured by a condition. This will also address travel behaviour of pupils.

The application is considered to comply with relevant Development Plan policies in respect of transport and movement, and is acceptable subject to a number of conditions: securing contributions; detailing deliveries and visibility from the access to the new block within a construction management plan, an updated school travel plan and detailed cycle layout and storage.

C) IS THE PROPOSAL ACCEPTABLE WITH REGARDS TO VISUAL IMPACT AND DESIGN, AND WOULD IT PRESERVE OR ENHANCE THE CHARACTER AND APPEARANCE OF THE COTHAM AND REDLAND CONSERVATION AREA AND SETTING OF ADJACENT LISTED AND LOCALLY LISTED BUILDINGS?

The site lies within the Cotham and Redland Conservation Area and part of the School is locally listed. There are also a number of Grade II Listed buildings surrounding the site and it is also located in close proximity to the Grade II* Western College to the South West of the site.

Section 12 of the national guidance within the National Planning Policy Framework (NPPF) 2012 further states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation, with any harm or loss requiring clear and convincing justification. Paragraph 133 states that where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or

loss. Further, Para 134 states that where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.

In addition, Policy BCS21 in the Bristol Core Strategy (Adopted 2011) advocates that new development should deliver high quality urban design and safeguard the amenity of existing development. Policy DM26 in the Site Allocations and Development Management Policies (Adopted 2014) expands upon BCS21 by outlining the criteria against which a development's response to local character and distinctiveness will be assessed. Development will not be permitted where it would be harmful to local character and distinctiveness or where it would fail to take the opportunities available to improve the character and quality of the area and the way it functions. Policy DM29 in the Site Allocations and Development Management Policies (Adopted 2014) further sets out that the design of new buildings should be of high quality. Policy DM28 in the Site Allocations and Development Management Policies (Adopted 2014) also states that development should create or contribute to a safe, attractive, high quality public realm that contributes positively to local character and identity. Policy DM27 in the Site Allocations and Development Management Policies (Adopted 2014) sets out that the height, scale and massing of development should be appropriate to the immediate context, site constraints, character of adjoining streets and spaces and setting.

Policy BCS22 in the Bristol Core Strategy (Adopted 2011) states that development proposals should safeguard or enhance heritage assets and the character and setting of areas of acknowledged importance including Conservation Areas. Policy DM31 in the Site Allocations and Development Management Policies (2014) expresses that development should preserve or enhance historic settings.

Finally, the Cotham and Redland Character Appraisal (2011) identifies Cotham School as a landmark building which '…dominates the Character Area due to the amount of development on its land'. The appraisal goes on to set out that the overdevelopment on the Cotham School site resulting in the [loss of] further green space is a threat.

The proposed school building would result in the further development of the school site, although given its position largely on the existing car park, the loss of green space is kept to a minimum. It is also recognised that the school site is relatively constrained within an urban block in the Cotham Area of the city and that opportunities to extend the school, to meet current and future demand, within this site are very limited. Given the significant site constraints the proposed location of the school building is acceptable.

The application site is located in a sensitive position and subsequently care needs to be taken to ensure that adjacent buildings and the setting of the conservation area are preserved. The proposed two storey school building is set back from the main locally listed school building (approximately by 25metres), positioned away from the highway, set at a lower level than Cotham Lawn Road and a comprehensive scheme of landscaping is proposed, all of which limit the impact of the development on open and extensive views of the building from the public realm. It is therefore considered that the proposal preserves the character and setting of the main school building and conservation area.

From Cotham Lawn Road the proposed school building would read as one and a half storeys. The flat roofed classroom building is at a lower level then adjacent 27 Cotham Road and the pitched element accommodating meeting and dining rooms is set at a lower level than the adjacent Cotham School. The scale of the building is therefore considered to relate well to the scale of surrounding buildings whilst also not detracting from them and reading as a subservient addition.

The proposed materials for the site include a mix of brick and metal cladding. The red brick would reflect the brickwork found on Cotham School and other buildings along Cotham Lawn Road. The more contemporary metal cladding is not opposed to in principle although this would be subject to a condition securing further detail and material treatment. Whilst it would be preferable to have zinc and

bronze, the applicant has advised that this would not be financially viable, and when balancing the benefits of the proposed scheme against these minor material changes, this is not considered to result in such detrimental harm that would warrant the refusal of the scheme in this instance.

The fenestration sizes and use of a soldier course above the windows reflects the detailing on the existing school building and adjacent buildings.

The Redland and Cotham Amenity Society object to the elevational treatment of the dining hall and meeting room element setting out that the steeply pitched metal clad gable is visually intrusive and inappropriate in relation to the original school building, street scene and conservation area. The society set out that a hipped roof would be preferable.

Whilst the monopitch roof as indicated on the display boards at the public consultation, would appear as more subservient roof form in relation the locally listed building, there are a number of gable fronted roof forms in the area to justify its use in the conservation area. Furthermore the impact of the gable fronted roof form would be mitigated by the set back of the proposal and additional landscaping on Cotham Lawn Road.

Following the above, whilst the gable fronted dining and meeting room element will result in some harmful impact on the overall character this harm is considered less than substantial, and is outweighed by the wider educational benefits of expanding the school.

The proposed two storey building is set well away from listed buildings in the area ensuring that the special interest of these buildings are not impacted.

Overall, the design of the proposed building is acceptable and would preserve the adjacent buildings and conservation area, in accordance with policies BCS21 BCS22, DM26, DM27, DM28, DM29, DM31 and NPPF the Cotham and Redland Character Appraisal (2011)

(D) WOULD THE PROPOSAL HARM THE AMENITY OF NEARBY OCCUPIERS?

Policy BCS21 in the Bristol Core Strategy (Adopted 2011) advocates that new development should deliver high quality urban design and safeguard the amenity of existing development.

Policy BCS23 (Pollution) also requires development to be designed so as not to have a detrimental impact on the surrounding environment. Included within this is the requirement that development should not impact on the viability of surrounding uses through its sensitivity to noise or other pollution. Policy DM33 in the Site Allocations and Development Management Policies (2014) states that development which has the potential for an unacceptable impact on environmental amenity by reason of pollution will be expected to provide an appropriate scheme of mitigation. Finally, Policy DM35 (Noise Mitigation) of the Site Allocation and Development Management Policies (2014) advocates that development which would have an unacceptable impact on environmental amenity or biodiversity by reason of noise will be expected to provide an appropriate scheme of mitigation. Development will not be permitted if mitigation cannot be provided to an appropriate standard with an acceptable design, particularly in proximity to sensitive existing uses or sites.

Overbearing impact/ sense of enclosure

A section of the proposed two storey building is sited approximately 2metres from the rear boundary of number 27 Cotham Lawn Road. However, as the property has a relatively long garden area (of around 20 metres in length), given the distance and the fact that the proposed building is set at an oblique angle from the dwellinghouse, the proposal is not considered to result in any detrimental harm by virtue of a sense of enclosure or overbearing impact.

Overlooking/ Loss of Privacy

The rear bedroom windows of no. 27 Cotham Lawn Road would be approximately 25m from the nearest first floor windows of the classroom block. Given this separation distance together with the buildings being located at an angle to one another it is not considered that the proposal would result in any detrimental harm by virtue of a loss of privacy or overlooking. In addition to this, it is noted that the eastern boundary, adjacent to the garden of no.27 Cotham Lawn Road, does not include any windows to avoid overlooking.

Overshadowing/ Loss of light

The eastern end elevation of the proposed classroom block stands about 3m from the boundary fence to No. 27 Cotham Lawn Road. The building could result in some shadowing to the rear portion of number 27 Cotham Lawn Roads garden at certain times of the year in the afternoon. Given the length of this garden (which is in excess of 20metres) and the fact that any overshadowing is only likely to affect a small portion of the rear section of garden, it is not considered that overshadowing to the rear of number 27 Cotham Lawn Road's outside amenity space would result in any significant detrimental harm to this occupier's amenity in this instance

Vegetation and trees located to the rear of number 27 Cotham Lawn Roads garden will still receive daylight for most of the year and for most of day and as a result the proposed works are not considered to detrimentally restrict the growth of this vegetation.

Additional trees proposed on the Cotham park boundary are small to prevent any detrimental harm to these occupiers by virtue of overshadowing.

Noise/ Disturbance

An acoustic report has been submitted with the application which identifies both internal noise levels within classrooms and gives noise limits for any ventilation or air conditioning plant to be provided at the building.

The report details that classrooms will be double glazed and ventilated preventing any detrimental harm via noise and disturbance in this regard.

The plant noise limits given for the plant noise level does not exceed background noise level at each receptor. This is acceptable subject to condition.

The provision of extra classrooms is to enable the school to take on an extra 135 pupils, increasing the numbers of pupils at the school from 1284 to 1419.

Whilst an increase in pupil numbers may lead to the potential for a slight increase in noise levels, given existing pupil numbers (1284), any impact is likely to be negligible.

Subject to the imposition of planning conditions (including those attached to the approved all weather pitch application 16/01156/F) the proposed works would safeguard the residential amenities of neighbouring occupiers.

E) SUSTAINABILITY

Current planning policy within the adopted Bristol Development Framework, Core Strategy (2011) requires new development to be designed to mitigate and adapt to climate change and meet targets to reduce carbon dioxide emissions. This should be achieved, amongst other measures, through efficient building design, the provision of on-site renewable energy generation to reduce carbon dioxide emissions by at least 20% based on the projected residual energy demand of new buildings.

The approach proposed should also be supported by the provision of a sustainability statement and an energy strategy.

The application is supported by a Sustainably Statement which demonstrates the sustainability measures that will be put into place. The scheme will comply with the Council's requirement for 20% from renewable energy and this will be provided through the installation of a 50m2 south-east facing PV array on a section of the flat roof above the classrooms.

A condition is attached requesting a strategy by which a BREEAM 'excellent' rating will be achieved.

There is an emerging heat network in the area and the area is a heat priority area subsequently the development needs to include infrastructure to enable it to connect to a district heating network in the future. This is secured via a condition.

F) DRAINAGE

Bristol Core Strategy (2011) Policy BCS16 states that all development should incorporate water management measures to reduce surface run-off.

The Flood Risk Technician was consulted as part of the assessment of this application and has raised no objections to the drainage strategy submitted.

G) DOES THE PROPOSAL RAISE ANY NATURE CONSERVATION, LANDSCAPE OR TREE ISSUES?

Policy BCS9 in the Bristol Core Strategy (2011) states that individual green assets should be retained wherever possible and that development should incorporate new or enhanced green infrastructure of an appropriate type, standard and size.

Policy BCS21 sets out that new development in Bristol should deliver high quality urban design. Development in Bristol will be expected to: Deliver a safe, healthy, attractive, usable, durable and well managed built environment comprising high quality inclusive buildings and spaces that integrate green infrastructure.

Policy DM15 Green Infrastructure Provision sets out the criteria for such provision and in respect of trees emphasises the importance of design, size, species and placement as part of overall landscape treatment. The importance of the visual and natural environment on people's health and well- being is also recognised. Policy DM17 requires that valuable existing trees to be incorporated into new developments or adequately compensated for if they are to be removed.

SADMP policy DM19 requires that development is designed and sited, in so far as practicably and viably possible to avoid any harm to identified habitats, species and features of importance. Where loss of nature conservation would arise, mitigation should be provided on site where possible. Green infrastructure should be used to enhance the site's nature conservation value.

The proposed development would result in the loss of 9 trees and repositioning of 3 trees. Following case officer advice, during the course of the planning process a revised Arboricultural Impact Assessment and Landscape Masterplan were provided setting out mitigation for the loss of trees.

Protection measures have also been set out for all remaining trees that could be affected by the proposals, including those within the garden of number 27 Cotham Lawn Road, to ensure that these trees are not damaged during the construction process.

Three of the retained tree features will be subject to construction within their root protection areas; root damage will be avoided by the use of a no-dig construction technique.

Replacement trees are located on the Cotham Lawn Frontage to reduce the impact of the building when viewed from the public realm. Another tree is proposed near to number 27 Cotham Lawn Road to help screen the development from this occupier. Proposed planting on the Cotham Park boundary will add to the 'leafy' feel of the area whilst also being smaller to reduce the risk of any overshadowing and so as not to dominate these occupiers' rear gardens. Further tree planting is also proposed around the all-weather pitch to help screen the proposed fencing.

On receipt of the revised Arboricultural Impact Assessment and Landscape Masterplan appropriate mitigation of the lost green infrastructure assets has been provided integrating some good tree planting in and around the new pitch, with trees of suitable future stature.

An ecological report was also submitted with this application. Given the proposed development involves the removal of trees Bristol City Councils Nature Conservation Officer has advised conditions were permission forthcoming.

A living roof was recommended to provide a habitat for wildlife. The developer has advised that the provision of such a roof would make the scheme unviable given time constraints and cost. Whilst this is regrettable this alone would not warrant the refusal of the scheme.

Following the above, it is considered (subject to suitable conditions as set out below) that the proposal would have no detrimental impact upon any habitat, species, trees within the site.

CONCLUSION

In accordance with policy, the proposed development addresses the need to expand the secondary school whilst not giving rise to unacceptable traffic conditions and safeguarding the character and appearance of the conservation area. The development would also have no adverse impact on wildlife/ecology, trees or surrounding residential amenity.

As such the approval of the application is recommended to Members, subject to conditions.

COMMUNITY INFRASTRUCTURE LEVY
How much Community Infrastructure Levy (CIL) will this development be required to pay?

This development is liable for CIL, however the CIL rate for this type of development, as set out in the CIL Charging Schedule, is £nil and therefore no CIL is payable.

RECOMMENDED GRANTED subject to condition(s)

Time limit for commencement of development

1. Full Planning Permission

   The development hereby permitted shall begin before the expiration of three years from the date of this permission.

   Reason: As required by Section 91 of the Town and Country Planning Act 1990, as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

Pre commencement condition(s)

2. Land affected by contamination - Site Characterisation

No development shall take place until an investigation and risk assessment, in addition to any assessment provided with the planning application, and has been completed in accordance with a scheme to assess the nature and extent of any contamination on the site, whether or not it originates on the site. The contents of the scheme should be submitted to and be approved in writing by the Local Planning Authority. The investigation and risk assessment must be undertaken by competent persons and a written report of the findings must be produced. The written report is subject to the approval in writing of the Local Planning Authority. The report of the findings must include:

(i) a survey of the extent, scale and nature of contamination;

(ii) an assessment of the potential risks to:
* human health,
* property (existing or proposed) including buildings, crops, livestock, pets, woodland and service lines and pipes,
* adjoining land,
* groundwaters and surface waters,
* ecological systems,
* archaeological sites and ancient monuments;

(iii) an appraisal of remedial options, and proposal of the preferred option(s).

This must be conducted in accordance with DEFRA and the Environment Agency's 'Model Procedures for the Management of Land Contamination, CLR 11'.

Reason: To ensure that risks from land contamination is understood prior to works on site both during the construction phase to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors

3. Land affected by contamination - Submission of Remediation Scheme

No development shall take place until a detailed remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health, buildings and other property and the natural and historical environment has been prepared, submitted to and been approved in writing by the Local Planning Authority. The scheme must include all works to be undertaken, proposed remediation objectives and remediation criteria, timetable of works and site management procedures. The scheme must ensure that the site will not qualify as contaminated land under Part 2A of the Environmental Protection Act 1990 in relation to the intended use of the land after remediation.

Reason: To ensure that risks from land contamination is understood prior to works on site both during the construction phase to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors.

4. Land affected by contamination - Implementation of Approved Remediation Scheme

In the event that contamination is found, no development other than that required to be carried out as part of an approved scheme of remediation shall take place until the approved remediation scheme has been carried out in accordance with its terms. The Local Planning Authority must be given two weeks written notification of commencement of the remediation scheme works.

Following completion of measures identified in the approved remediation scheme, a verification report that demonstrates the effectiveness of the remediation carried out must be produced, and be approved in writing of the Local Planning Authority.

Reason: To ensure that risks from land contamination both during the construction phase and to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors.

5. Construction Management Plan

No development shall take place including any works of demolition until a Construction Management Plan or construction method statement has been submitted to and been approved in writing by the Local Planning Authority. The approved plan/statement shall be adhered to throughout the construction period. The statement shall provide for:

Condition survey of Hanbury Road and Cotham Lawn Road
Parking of vehicle of site operatives and visitors
Routes for construction traffic
Hours of operation
Method of prevention of mud being carried onto highway
Pedestrian and cyclist protection
Proposed temporary traffic restrictions
Arrangements for turning vehicles

Reason: In the interests of safe operation of the highway in the lead into development both during the demolition and construction phase of the development

6. Approval of road works necessary

Prior to commencement of development general arrangement plan(s) indicating the following works to the highway shall be submitted and approved in writing by the

Local Planning Authority
footway build outs at the junction of Cotham Grove and Archfield Road as shown in principle on Drawing 0838-001
Improvements to the zebra crossing in Hampton Road including but not limited to surface dressing, lining and halos
These works shall then be completed prior to first occupation of the development to the satisfaction of the Local Highway Authority and as approved in writing by the Local Planning Authority.

Reason: In the interests of public safety and to ensure that all road works associated with the proposed development are planned and approved in good time to include any statutory processes, are undertaken to a standard approved by the Local Planning Authority, and are completed before occupation

NB: Planning permission is not permission to work in the highway. A Highway Agreement under Section 278 of the Highways Act 1980 must be completed, the bond secured and the City Council's technical approval and inspection fees paid before any drawings are considered and approved and formal technical approval is necessary prior to any works being permitted.

7. Further details of internal servicing

No development shall take place until further details showing the internal servicing and turning movements accommodated within the site have been submitted to and been approved in writing by the Local Planning Authority. The building(s) hereby permitted shall not be occupied or the use commenced until the facilities for loading, unloading, circulation and manoeuvring have been completed in accordance with the approved plans. Thereafter, these areas shall be kept free of obstruction and available for these uses.

Reason: To ensure that there are adequate servicing facilities within the site in the interests of highway safety.

8. Further details - Typical Sections of AWP

No development shall take place until detailed drawings at the scale of 1:100/1:50 showing typical cross sections through the development, including adjacent land and the all-weather-pitch base/sub-base, have been submitted to and be approved in writing by the Local Planning Authority. The detail thereby approved shall be carried out in accordance with that approval.

Reason: In the interests of visual amenity and the character and appearance of the conservation area.

9. Noise from the all weather pitch

No development shall take place until there has been submitted to and approved in writing, by the Local Planning Authority (LPA), a detailed assessment on the potential for noise from the all weather pitch affecting neighbouring residential properties.

If the assessment indicates that noise from the development is likely to affect neighbouring noise sensitive premises then a detailed scheme of noise mitigation measures shall be submitted to and approved in writing by the LPA prior to the commencement of the development. The noise mitigation measures shall be designed so that nuisance will not be caused to the occupiers of neighbouring premises by noise from the development.

The noise assessment shall be carried out by a suitably qualified acoustic consultant/engineer and shall take into account the provisions of BS4142: 2014 "Methods for rating and assessing industrial and commercial sound" and BS8233: 2014 "Guidance on sound insulation and noise reduction for buildings."

The approved details shall be implemented in full prior to the commencement of the use permitted and be permanently maintained.

Reason: To safeguard the residential amenities of neighbouring occupiers from undue noise and disturbance.

10. Construction Environmental Management Plan

No development shall take place until a site specific Construction Management Plan has been submitted to and approved in writing by the Council. The plan must demonstrate the adoption

and use of the best practicable means to reduce the effects of noise, vibration, dust and site lighting.

NB: The Construction Environmental Management Plan should also include but is not limited to reference to the following:

-All works and ancillary operations which are audible at the site boundary, or at such other place as may be agreed with the Local Planning Authority, shall be carried out only between the following hours: 08 00 Hours and 18 00 Hours on Mondays to Fridays and 08 00 and 13 00 Hours on Saturdays and at no time on Sundays and Bank Holidays.
-Mitigation measures as defined in BS 5528: Parts 1 and 2 : 2009 Noise and Vibration Control on Construction and Open Sites shall be used to minimise noise disturbance from construction works.
-Procedures for emergency deviation of the agreed working hours.
-Control measures for dust and other air-borne pollutants . This must also take into account the need to protect any local resident who may have a particular susceptibility to air-borne pollutants.
-Measures for controlling the use of site lighting whether required for safe working or for security purposes.
Noise from plant & equipment affecting residential

Reason: To safeguard the residential amenities of neighbouring occupiers from undue noise and disturbance.

11. Noise from plant and equipment

No development shall take place until an assessment to show that the rating level of any plant & equipment, as part of this development, will be at least 5 dB below the background level at any time at residential premises.

The assessment must be carried out by a suitably qualified acoustic consultant/engineer and be in accordance with BS4142: 1997-"Method of rating industrial noise affecting mixed residential and industrial areas".

Reason: To safeguard the residential amenities of neighbouring occupiers from undue noise and disturbance.

12. Cycle Parking - not shown

No development shall take place until further details of the provision of adequate cycle parking have been submitted to and been approved in writing by the Local Planning Authority. No building or use hereby permitted shall be occupied or the use commenced until the cycle parking provision shown on the approved plans has been completed, and thereafter, be kept free of obstruction and available for the parking of cycles only.

Reason: To ensure the provision and availability of adequate cycle parking.

13. Clearance of vegetation

No clearance of vegetation or structures suitable for nesting birds, shall take place between 1st March and 30th September inclusive in any year without the prior written approval of the local planning authority. The authority will require evidence provided by a suitably qualified ecological consultant that no breeding birds would be adversely affected before giving any approval under this condition. Where checks for nesting birds by a qualified ecological

consultant are required they shall be undertaken no more than 48 hours prior to the removal of vegetation or the demolition of, or works to buildings.

Reason: To ensure that wild birds, building or using their nests are protected.

14. Notwithstanding the details shown on the approved plans, prior to the relevant element being commenced samples of the following items shall be submitted to and approved in writing by the Local Planning Authority. Development shall be carried out in full accordance with the approved sample unless otherwise agreed in writing by the Local Planning Authority.

(a) Material and finish of all new windows and doors
(b) All external cladding materials
(c) Brickwork

Reason: In order that the appearance of the development is appropriate and to ensure special interest of the Locally Listed Building is safeguarded as well as the character and appearance of the Cotham and Redland Conservation Area.

15. Further details of materials for all weather pitch

Detailed drawings and/or manufacturer's information of the enclosure fencing for the all-weather-pitch, including its colour and any noise/vibration reducing features, shall be submitted to and be approved in writing by the Local Planning Authority before the relevant part of work is begun. The detail thereby approved shall be carried out in accordance with that approval.

Reason: In the interests of visual amenity and the character and appearance of the conservation area and to safeguard the residential amenity of neighbouring occupiers from undue noise and disturbance.

16. Large Scale Details

Drawings to a minimum 1:10 scale (also indicating materials, treatments and finishes) of the following items shall be submitted to and approved in writing by the Local Planning Authority before the relevant part of work is begun unless otherwise agreed in writing by the Local

(a) New windows and doors (showing sectional profiles, cills, surrounds and depth of external reveals)
(b) All new joinery

The development shall then be carried out in full accordance with the approved details.

Reason: In order that the appearance of the development is appropriate and to ensure special interest of the Locally Listed Building is safeguarded as well as the character and appearance of the Cotham and Redland Conservation Area.

17. BREEAM

Prior to commencement, evidence that the development is registered with a BREEAM certification body and a BREEAM pre-assessment demonstrating a strategy by which a BREEAM 'Excellent' rating will be achieved shall be submitted to the local planning authority and approved in writing. Prior to occupation, final post construction BREEAM certificates indicating that the BREEAM 'Excellent' rating has been achieved shall be submitted to the local planning authority and approved in writing.

Reason: To ensure that the development achieves BREEAM excellent rating level; (or any such equivalent national measure of sustainability for building design which replaces that scheme) and that this is done early enough in the process to allow adaptions to designs and assessment and certification shall be carried out by a licensed BREEAM assessor and to ensure that the development contributes to mitigating and adapting to climate change and to meeting targets to reduce carbon dioxide emissions in accordance with BCS15 (Sustainable design and construction)

18. Protection of Retained Trees During the Construction Period

No demolition or construction work of any kind shall begin on the site until the approved fences and protection has been erected around the retained trees in the position and to the specification detailed in the Arboricultural Impact Assessment prepared by Mike Wood and dated 23rd October 2017 and as shown on the approved Tree Protection Plan referenced 171020-1.4-CSEX-TPP-NC. Photographic evidence of the protective fencing should be sent to the Local Planning Authority as soon as the fencing has been put in place.

The Local Planning Authority shall be given not less than two weeks prior written notice of the completed installation of the protective fencing by the developer prior to the commencement of works on the site in order that the Local Planning Authority may verify in writing that the approved tree protection measures are in place when the work commences.

The approved fences and ground protection shall be in place before any equipment, machinery or materials are brought on to the site for the purposes of demolishing or development and shall be maintained until all equipment, machinery and surplus materials have been removed from the site.

Within the fenced area(s) there shall be no scaffolding, no stockpiling of any materials or soil, no machinery or other equipment parked or operated, no traffic over the root system, no changes to the soil level, no excavation of trenches, no site huts, no fires lit, no dumping of toxic chemicals and no retained trees shall be used for winching purposes. If any retained tree is removed, uprooted or destroyed or dies, another tree shall be planted at the same place and that tree shall be of such size and species, and shall be planted at such time, as may be specified in writing by the Local Planning Authority.

Under no circumstances should the tree protection be moved during the period of the development and until all works are completed and all materials and machinery are removed.

Landscaping works within protected areas is to be agreed with the Local Planning Authority and carried out when all other construction and landscaping works are complete.

Reason: To protect the retained trees from damage during construction and in recognition of the contribution which the retained trees give and will continue to give to the amenity of the area.

Pre occupation condition(s)

19. Land affected by contamination - Reporting of Unexpected Contamination

In the event that contamination is found at any time when carrying out the approved development that was not previously identified it must be reported in writing immediately to the Local Planning Authority. An investigation and risk assessment must be undertaken in accordance with the requirements of Condition 2; and where remediation is necessary a remediation scheme must be prepared in accordance with the requirements of Condition 3;, which is to be submitted to and be approved in writing by the Local Planning Authority.

Following completion of measures identified in the approved remediation scheme a verification report must be prepared, which is subject to the approval in writing of the Local Planning Authority in accordance with condition 4;.

Reason: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors.

20. Community Use Agreement

Prior to the first use of the all-weather pitch, hereby approved, a community use agreement is to be prepared (in consultation with Sport England) and submitted to and approved in writing by the Local Planning Authority. The agreement shall apply to the sports facilities proposed and include details of:

Pricing policy,
Hours of use,
Access by non-educational establishment users/non-members,
Management responsibilities,
Mechanism for review, and
Measures necessary in order to secure the effective community use of the facilities.

The development shall thereafter be operated in accordance with the approved community use agreement.

Reason: To secure well managed safe community access to the sports facilities and to meet development plan and Sport England objectives.

21. Implementation/Installation of Refuse Storage and Recycling Facilities - Shown

No building or use hereby permitted shall be occupied or the use commenced until the refuse store, and area/facilities allocated for storing of recyclable materials, as shown on the approved plans have been completed in accordance with the approved plans. Thereafter, all refuse and recyclable materials associated with the development shall either within the building(s) that form part of the application site. No refuse or recycling material shall be stored or placed for collection on the public highway or pavement, except on the day of collection.

Reason: To safeguard the amenity of the occupiers of adjoining premises, protect the general environment, and prevent obstruction to pedestrian movement, and to ensure that there are adequate facilities for the storage and recycling of recoverable materials.

22. Completion of Vehicular Access - Shown

No building or use hereby permitted shall be occupied or the use commenced until the means of vehicular access has been constructed and completed in accordance with the approved plans and the said means of vehicular access shall thereafter be retained for access purposes only.

Reason: In the interests of highway safety.

23. Completion and Maintenance of Car/Vehicle Parking Shown

No building or use hereby permitted shall be occupied or the use commenced until the car/vehicle parking area shown on the approved plans has been be completed, and thereafter, the area shall be kept free of obstruction and available for the parking of vehicles associated with the development

Reason: To ensure that there are adequate parking facilities to serve the development.

24. Travel Plans - Not submitted

No building or use hereby permitted shall be occupied or the use commenced until a Travel Plan comprising immediate, continuing and long-term measures to promote and encourage alternatives to single-occupancy car use has been prepared, submitted to and been approved in writing by the Local Planning Authority. The approved Travel Plan shall then be implemented, monitored and reviewed in accordance with the agreed travel Plan Targets to the satisfaction of the council.

Reason: In order to deliver sustainable transport objectives including a reduction in single occupancy car journeys and the increased use of public transport, walking & cycling.

25. Heat Networks - Future proofed for connection

Prior to occupation detail demonstrating proposed measures to future-proof the development for connection to a future district heat network shall be submitted to and approved in writing by the Local Planning Authority. The development shall be constructed and thereafter maintained in accordance with the approved details.

Reason: To ensure the development contributes to minimising the effects of, and can adapt to a changing climate in accordance with policies BCS13 (Climate change) and BC14 (sustainable energy).

26. Ten year landscape and nature conservation management plan

Prior to occupation of the development hereby approved, a ten year landscape and nature conservation management plan shall be produced for the application area by a qualified ecological consultant. This shall include consideration of features of interest, objectives, management compartments and prescriptions, a work schedule including a ten year annual work plan, resourcing including a financial budget and ecological monitoring. The development shall be carried out in accordance with the approved plan or any amendment as approved in writing by the local planning authority.

NB: In terms of what the management plan should contain, this should include the following, which incorporates the recommendations in the submitted ecological survey:
o Creation of habitat log piles from the nine trees which are to be felled;
o Planting small areas with nectar-rich flowers, for example lavender, marjoram and wildflower mixes in raised planters;
o Fitting bird and bat boxes to trees around the site. The management plan should include a site plan showing the specification, orientation, height and location of bird and bat boxes;
o Providing insect hotels and/or bee logs;
o And if possible a wildlife pond.

Reason: To conserve and enhance the nature conservation and landscape features on the site.

Post occupation management

27. External lighting

Any light created by reason of the development shall meet the Obtrusive Light Limitations for Exterior Lighting Installations in table 2 of the Institute of Light Engineers Guidance Notes for the Reduction of Obtrusive Lighting, GN01:2011.

Reason: In order to safeguard the amenities of adjoining residential occupiers.

28. Restriction of noise from plant and equipment

The rating level of any noise generated by plant & equipment as part of the development shall be at least 5 dB below the background level as determined by BS4142: 2014 Methods for rating and assessing industrial and commercial sound.

Reason: To safeguard the amenity of nearby premises and the area generally.

29. Noise from plant & equipment affecting residential

The rating level of any noise generated by plant & equipment as part of the development shall be at least 5 dB below the pre-existing background level at any time at residential premises.

Any assessments to be carried out and be in accordance with BS4142: 2014 Methods for rating and assessing industrial and commercial sound.

Reason: To safeguard the amenity of nearby premises and the area generally.

30. Operating Hours

The use of the all-weather-pitch hereby approved shall be restricted to the hours of 08:30hrs to 21:00hrs Monday to Friday, 09:00hrs to 17:00hrs Saturdays and not at all on Sundays and Bank Holidays, unless otherwise agreed in writing with the Local Planning Authority.

Reason: - In order to protect the residential amenities of nearby occupiers from undue noise and disturbance.

31. Energy and Sustainability in accordance with statement:

The development hereby approved shall incorporate the energy efficiency measures, renewable energy, sustainable design principles and climate change adaptation measures into the design and construction of the development in full accordance with the sustainability strategy (Troup Bywaters & Anders, 28th July 2107) prior to occupation. A total 26% reduction in carbon dioxide emissions beyond Part L 2013 Building Regulations in line with the energy hierarchy shall be achieved, and a 21% reduction in carbon dioxide emissions below residual emissions through renewable technologies shall be achieved.

Reason: To ensure the development incorporates measures to minimise the effects of, and can adapt to a changing climate in accordance with policies BCS13 (Climate Change), BC14 (sustainable energy), BCS15 (Sustainable design and construction), DM29 (Design of new buildings)

32. Landscape (planting) works - shown

The planting proposals hereby approved shall be carried out no later than during the first planting season following the date when the development hereby permitted is ready for occupation or in accordance with a programme agreed in writing with the council. All planted materials shall be maintained for five years and any trees or plants removed, dying, being severely damaged or becoming seriously diseased within 5 years of planting shall be replaced with others of similar size and species to those originally required to be planted.

Reason: To ensure that the appearance of the development is satisfactory.

List of approved plans

33. List of approved plans and drawings

The development shall conform in all aspects with the plans and details shown in the application as listed below, unless variations are agreed by the Local Planning Authority in order to discharge other conditions attached to this decision.

Site waste management plan, received 14 August 2017
A0200 Proposed ground floor plan, received 14 August 2017
A0201 Proposed first floor plan, received 14 August 2017
A0100 Location plan, received 14 August 2017
A0101 Existing site plan, received 14 August 2017
A0102 Existing site elevation, received 14 August 2017
A0110 Proposed site plan, received 14 August 2017
A0160 Proposed landscaping plan, received 14 August 2017
A0202 P04 Proposed roof plan, received 14 August 2017
A0300 P04 Proposed elevations, received 14 August 2017
A0305 Proposed context elevation, received 14 August 2017
A0310 Building sections, received 14 August 2017
A0313 Long sections, received 14 August 2017
Noise screening assessment, received 14 August 2017
2101 P02 Proposed drainage strategy, received 14 August 2017
Preliminary Desk Based report, received 14 August 2017
External lightning layout, received 14 August 2017
Existing utility services layout, received 14 August 2017
Ecological report, received 14 August 2017
Sustainability Strategy Rec P01, received 16/10/2017
Drainage and external works design principles, received 14 August 2017
171023-1.3-CSE-AIA-CH Arboricultural Impact Assessment, received on 23rd October 2017.
CLDL234601.Rev P1 Proposed Landscape Masterplan and Tree Planting, received on 20th October 2017
CLDL234602.Rev P1 Proposed Landscape Masterplan and tree planting, received on 20th October 2017
CLDL234603.Rev P2 Plan assisting the proposed Landscape Masterplan and tree planting 2, received 23rd October 2017

Reason: For the avoidance of doubt.

Advices

1 Works on the Public Highway

The development hereby approved includes the carrying out of work on the public highway. You are advised that before undertaking any work on the highway you are required to enter into a formal agreement with the Council which would specify the works and the terms and conditions under which they are to be carried out. You should contact TDM - Strategic City Transport (CH), Bristol City Council, PO Box 3176, Bristol, BS3 9FS, telephone 0117 903 6846 or email TransportDM@bristol.gov.uk allowing sufficient time for the checking and approval of the proposals.

2 Impact on the highway network during construction

The development hereby approved is likely to impact on the highway network during its construction. The applicant is required to contact Highway Network Management to discuss any temporary traffic management measures required, such as footway, Public Right of Way, or carriageway closures or temporary parking restrictions. Please call 0117 9036852 or email traffic@bristol.gov.uk a minimum of eight weeks prior to any activity on site to enable Temporary Traffic Regulation Orders to be prepared and a programme of Temporary Traffic Management measures to be agreed.

3 District Heating future-proofed connection:

Details to demonstrate how a development has been future-proofed to connect to a heat network should include:

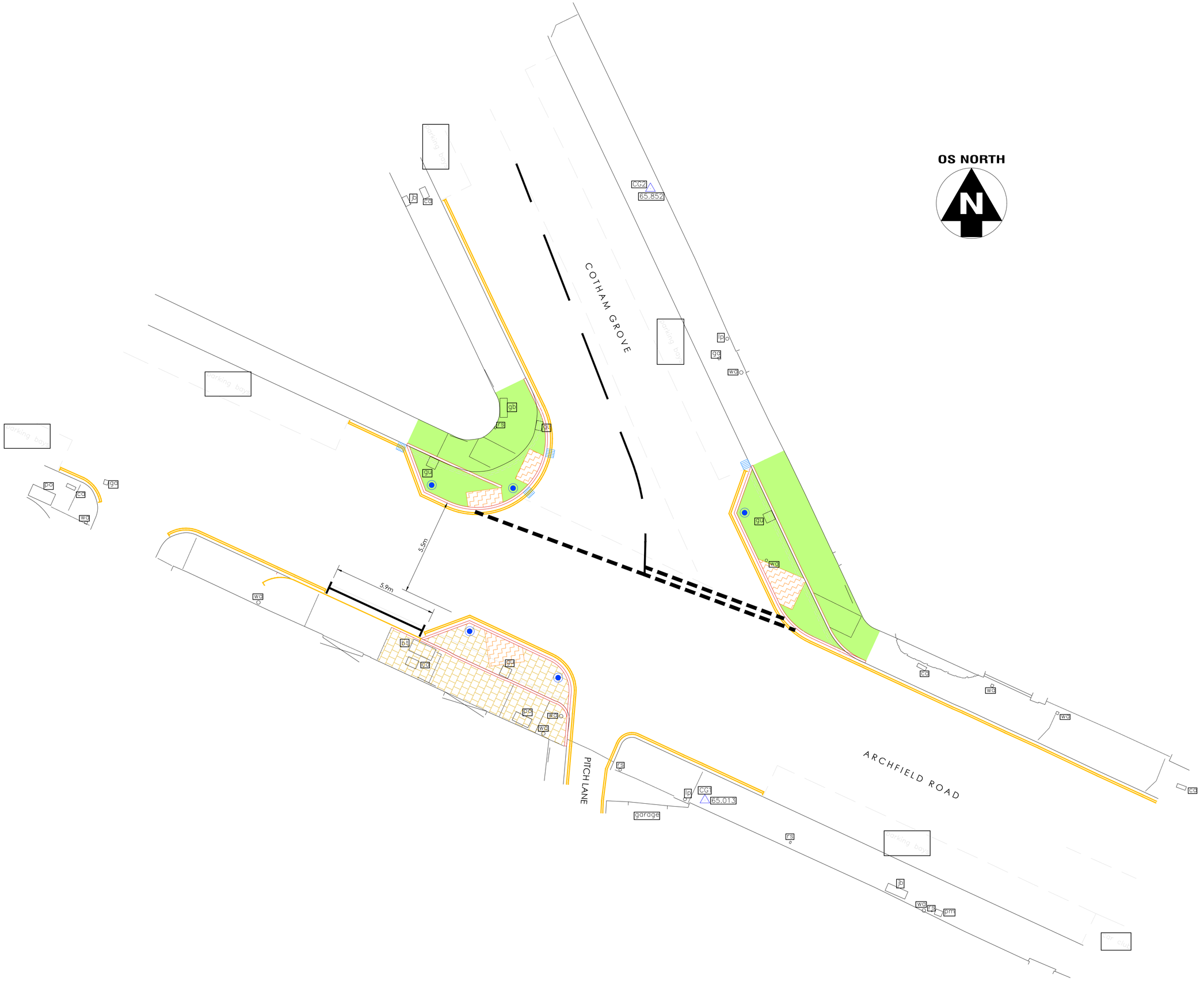
- Provision of a single plant room, located adjacent to the planned (or if not planned, likely) heat network route, producing all hot water via a communal heating system, including engineering measures to facilitate the connection of an interfacing heat exchanger;
- The design of space heating and domestic hot water services systems in order to achieve consistently low return temperatures in line with the CIBSE: Heat Networks Code of Practice for the UK (or other future replacement standard)
- Space identified for the heat exchanger;
- Provisions made in the building fabric such as soft-points in the building walls to allow pipes to be routed through from the outside to a later date; and
- External (where detail is available) and internal district heat pipework routes identified and safeguarded.
- Provision for monitoring equipment as specified by the DH provider.
- Provision of contact details of the person(s) responsible for the development's energy provision for the purpose of engagement over future connection to a network.
-

commdelgranted
V1.0211

Supporting Documents

1. Cotham School Cotham Lawn Road BS6 6DT.

1. E17047-02-Rev A
2. 17.06912.Cond.plan
3. 17.04367.plan
4. FAQ Way Forward (BCC Transport Public Consultation)



KEY

▨	200 x 133 x 60mm PCC BUFF BLISTER BLOCK PAVING ON 30mm THICK CAT II SAND ON 300mm THICK TYPE 1 UNBOUND MIXTURE SUB-BASE.
▦	400 x 400 x 65mm PCC SLABS WITH CHAMFERED EDGES LAID ON 30mm THICK CAT II SAND ON 300mm THICK TYPE 1 UNBOUND MIXTURE SUB-BASE.
🟩	20mm SURFACE COURSE: AC 6 CLOSE SURF 100/150, NOM. AGGREGATE 6mm, NO LIMESTONE AGGREGATE, 100 PEN ON 55mm BINDER COURSE: AC 20 DENSE BIN 100/150, 100 PEN ON 300mm THICK TYPE 1 UNBOUND MIXTURE SUB-BASE.
◉	PROPOSED BOLLARD.
=	PROPOSED PENNANT KERBING.
├─┤	EXISTING H BAR ROAD MARKING TRANSFERRED TO NEW LAYOUT.
=	EXISTING DOUBLE YELLOW MARKINGS TRANSFERRED TO NEW LAYOUT.
▥	PROPOSED GULLY.

CITY DESIGN

ENGINEERING
DESIGN

PO Box 3176, Bristol. BS3 9FS

Rev.	Date	Description	By
A	20/01/19	BUILDOUT REDUCED, DYL EXTENDED	JNW

Project
COTHAM SCHOOL
PEDESTRIAN IMPROVEMENTS

Title
PRELIMINARY LAYOUT
OPTION 2

Client
HIGHWAYS
ROAD SAFETY
CATH BOUTWOOD

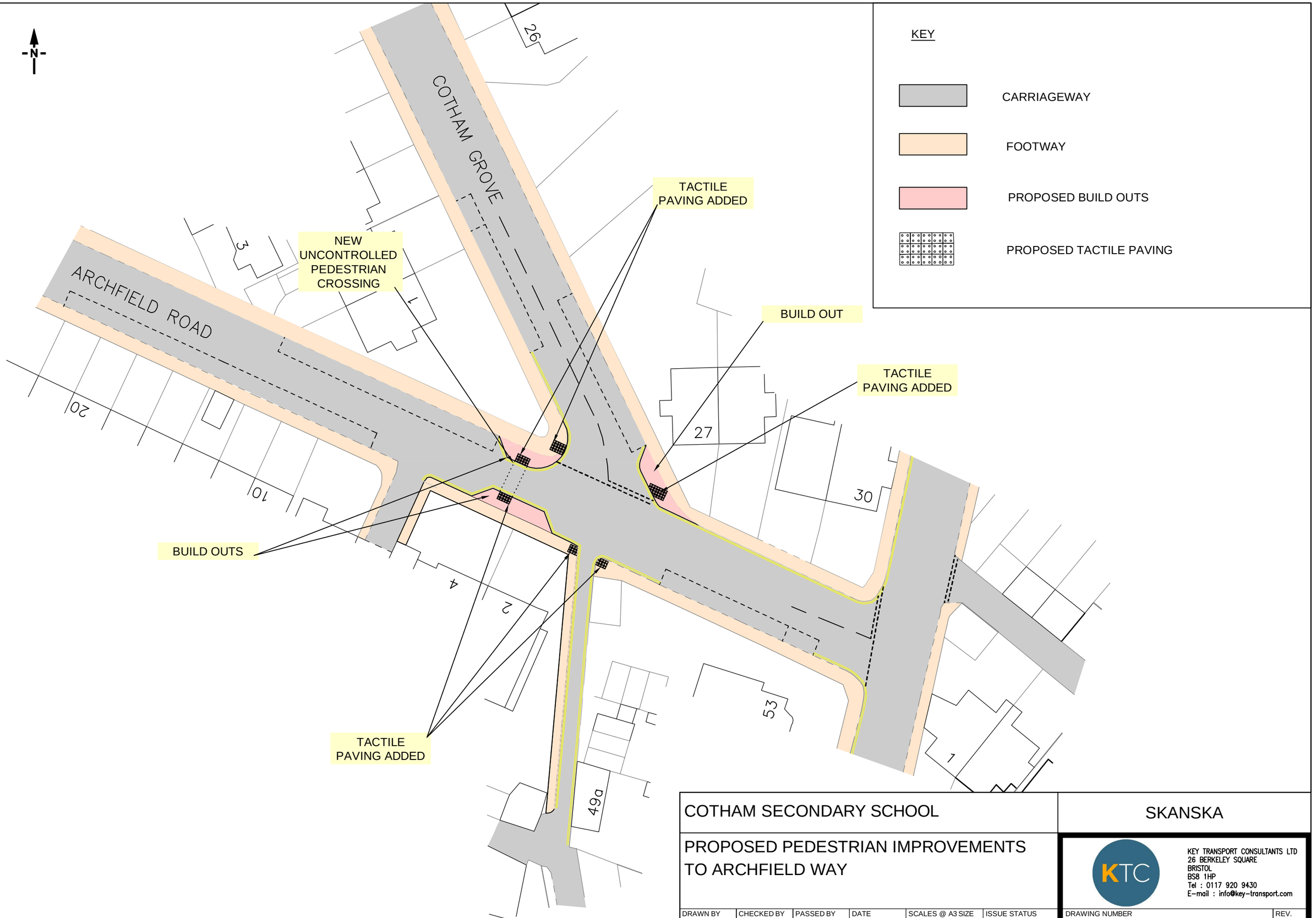
Drawn by
JNW
Date Drawn
FEBRUARY 2019
Status
PRELIMINARY

Checked by
Date Issued
Issued by

Scale
1 : 100 @ A1

Project Number		Drawing		Revision
E17047	-	**02**	-	**A**

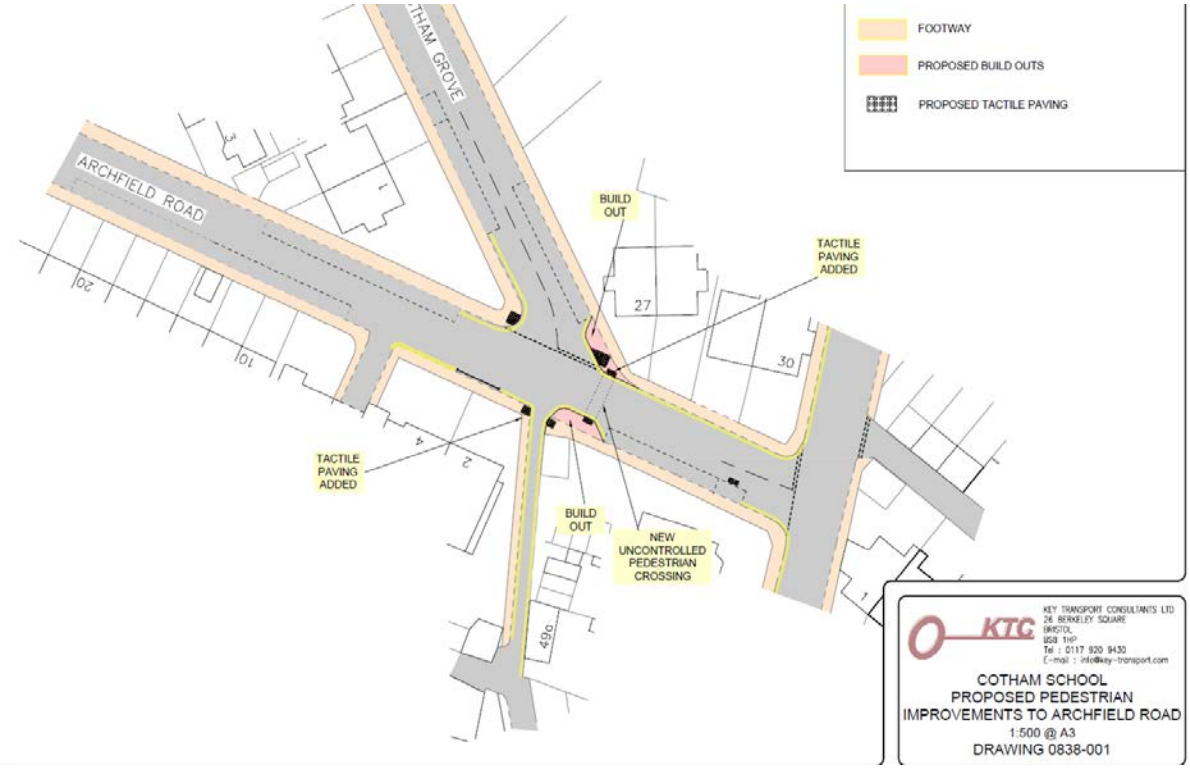
CAD FILE NAME : F:\DATA\Jobs\0838 Cotham School\CAD\0838-001b.dwg



COTHAM SECONDARY SCHOOL	SKANSKA
PROPOSED PEDESTRIAN IMPROVEMENTS TO ARCHFIELD WAY	KEY TRANSPORT CONSULTANTS LTD 26 BERKELEY SQUARE BRISTOL BS8 1HP Tel : 0117 920 9430 E-mail : info@key-transport.com

DRAWN BY	CHECKED BY	PASSED BY	DATE	SCALES @ A3 SIZE	ISSUE STATUS	DRAWING NUMBER	REV.
MJ	DRT	DRT	FEB '18	1:500	PRELIMINARY	0838-001	B

IN PRINCIPLE SCHEME OF WORKS (ORIGINAL APPLICATION) 17/04367/FB



EXCERPT FROM TRANSPORT STATEMENT

Frequently Asked Questions and Way Forward

What is the scheme for?

The proposal is a build out to the west of the junction of Archfield Road/Pitch Lane to help pedestrians cross the road by improving visibility and slowing traffic.

Why were these proposals suggested?

The Transport Statement for Cotham School Expansion noted that 'the junction of Cotham Grove and Archfield Road is considered unsafe to cross. At present, some pupils use Pitch Lane as a more direct shortcut from Cotham Road to Cotham Grove. On-site observations noted that although Pitch Lane is a narrow lane with narrow footways along both sides of the carriageway, the use of this road is restricted to 'access only' to the small number of garages lining the lane for all motor vehicles and the road includes doubles yellow lines along its entire length.

As such, Pitch Lane is a suitable walk route for pupils given its limited traffic movements. Pitch Lane emerges onto Archfield Road directly opposite the wide junction entry at Cotham Grove. Furthermore, due to the broad width of Archfield Road and its close proximity to the nearby junction with Cotham Road, pupils crossing in this location may experience vehicles turning into the road and approaching before they have completed their crossing movement safely.

To make pedestrian safety improvements on Archfield Road, it is considered that the introduction of the measures ……. would help to formalise crossing movements into a safe location and offer some degree of protection for pupils who regularly make crossing movements in this location.'

These findings are backed up by the number of enquiries both from local councillors and the former Neighbourhood Partnership who have received requested improvements at this location.

Who asked for this scheme?

The proposal was recommended by Planning and Transport officers of Bristol City Council to mitigate the effects of the development (expansion) of Cotham School. Cotham School is acting as developer through the planning process.

Why are you proposing to put the build out here?

The highway works package, which was secured through the application for the Cotham School Expansion, tries to address a problem specific to the planning proposal. This was to provide an improved crossing point at a location that has been identified locally as difficult to cross, and was secured in order to address the desire lines of school children crossing to and from the expanded school site. The proposals were identified by officers as necessary to mitigate the increase in traffic and to improve safety for pedestrians associated with the increase in pupils at the school.

Why are you proposing to provide a build out here when Cotham School do not want it?

Cotham School is acting as 'developer' and employed consultants to mitigate the effects of their expansion. Bristol City Council directed the consultants to existing problems for Cotham School students. It is immaterial whether the developer (Cotham School) wants the scheme as the Planning

and Transport departments of Bristol City Council recommend that this junction is improved for pupils to cross.

What happened to the original Neighbourhood Partnership scheme?

This junction was subject to a feasibility study funded by the Neighbourhood Partnership, which made recommendations to address the issues experienced at this junction. The current proposal draws directly on the findings of the feasibility study and incorporates its recommendations. It should be noted that there has never been any Neighbourhood Partnership funding identified for implementing this scheme.

Why can't you change the priorities?

Analysis work was undertaken in 2014 – see the document 'Bishopston, Cotham and Redland Neighbourhood Partnership Transport Sub-Group Report' for more information.

Option 1 suggested the implementation of a left turn ban from Archfield Road to be able to provide a build out on the north east side of Cotham Grove. This was not recommended this as it would be impossible to enforce and could lead to a false sense of security for pedestrians.

Option 2 suggested the reversal of the junction priorities to aid bus movements from Cotham Brow into Archfield Road and vice versa but highlighted several issues and did not meet visibility requirements.

The report concluded that a revised Option 1 should be considered in which a build out is introduced on the north west corner. The current proposal draws directly on the findings of the feasibility study and incorporates its recommendations. It should be noted that there has never been any funding identified for implementing this scheme through the Neighbourhood Partnerships.

How many parking spaces will be lost?

No parking spaces will be lost. There is an informal Keep Clear Marking present which by its nature indicates that the area should be kept clear, which protects access to the Nursery being blocked. There are not allowed to be provided to reserve the highway space for Nursery parking.

No other parking restrictions are proposed. The build out will remove part of the area that deliveries and parents currently use to drop off. There are still available parking spaces in the Residents Parking Scheme. The nursery's transport statement accompanying their recent expansion application noted the availability of parking in the area to accommodate dropping off which demonstrated that there would be more than enough on-street parking for the nursery. Their application to expand was granted on this basis.

Are you building a zebra crossing?

No. The proposal is a build out with dropped kerbs and tactile paving. Bollards will also be installed to prevent parking on the pavement.

Why did you change the original proposed location in the original planning documents?

Subsequent alterations were made to the proposals following more in-depth assessment of the site with regard to pedestrian activity and engineering practicalities and the scheme was altered to better serve these pedestrians and the location. When Highways officers visited the site, it quickly became apparent that pedestrians are choosing to cross the other side of the road than the original proposal.

The condition discharge documentation was made available on the Planning Portal. The Engineers went out on site and noted that the proposal didn't work out in terms of drainage, camber, etc. and taking into account the Neighbourhood Partnership feasibility recommendations; it was felt that it would be better moved.

There is a Grampian condition that the works as shown in principle in the application were implemented - further details to be agreed in the condition. As with most highway schemes, not all of the engineering details can be finalised before permission is given because of timescales, so that's why we ask for more detail at condition stage.

How will nursery deliveries access the car park?

The proposal has been designed as a vehicle cross over and access will be retained.

How will children be dropped off for the nursery?

It is recognised that the nursery operators are concerned with the impact on their ability to drop off on the public highway directly outside the site. However, the use of the public highway to provide a scheme to improve pedestrian safety and reduce conflict at a location identified locally as problematic is more in line with the City Council's road safety, transport and planning policies than the retention of public highway specifically for dropping off to serve a private business.

Schools, nurseries etc. often have Keep Clear zig zag markings to prevent parents driving and other vehicle users from parking in the vicinity of the child care setting. This is to reduce the conflict between vulnerable road users and parked vehicles. Drivers dropping off children do not have a right to drop their children off directly outside the child care provider.

The Nursery's expansion planning application demonstrated that there were plenty of parking spaces within the Residents Parking Scheme area to allow drop off.

Have you undertaken a Road Safety Audit?

No. The Council are not required to undertake Safety Audits on minor schemes implemented by themselves, as Highway Authority Notwithstanding this, the scheme is being designed by qualified Road Safety Auditors.

Have you undertaken pedestrian surveys?

A number of surveys have been undertaken as a result of enquiries, to confirm which side of Pitch Lane pedestrians/pupils are crossing from. Results show during nursery/school drop off times that pupils are choosing to cross from Archfield Road southern footway to the west of Pitch Lane and vice versa.

Why are you spending tax payers money on this?

The funding for the scheme has come from the planning application for the expansion of Cotham School.

Why can't you spend the money on the kids education?

As this is a planning application, the funding must be spent on highway measures. It is the duty of the council to improve safety and promote sustainable transport to school children as well as to educate them.

Who has been consulted?

The proposals for an informal crossing point were included in the planning application documents. In terms of the consultations carried out on the original consent there was a site and press notice and 63 neighbours consulted; all the plans were available to view online.

On reflection, it would have been helpful to consult local residents when the discharge of condition details were submitted for the highways works, however, it is not a planning requirement to publicly consult on discharge of condition applications. The planning application was decided at the DC Committee in November 2017.

The off-site highway works often evolve as part of the planning application and so this would not have necessarily be known from the beginning of the process (when the consultations are done). Given the works are also proposed as improvement works for highways safety reasons this would not ordinarily be contentious.

In this instance, given the sensitivity of the site and number of objections raised to the off-site highway works it is recognised that it would be prudent to consult further on the proposed highway works/ revised design with a subsequent application. Further alterations to the scheme will therefore be addressed through the submission of a section 73 (condition variation) application.

BCC Transport are acting as agents for the Developers and implementing the scheme on their behalf, and consult on all schemes in line with the Traffic Calming Regulations, regardless of Traffic Regulation Orders.

Why did you not consult with the Nursery originally?

There was no direct consultation with the nursery on this scheme during the planning process as the highway works are quite remote from the school. In view of this, on such schemes where the Council are implementing the works, we undertake further consultation at the highway design stage.

After this, out of courtesy officers delivering the works contacted the Nursery to inform them that there was a buildout proposed, attaching the indicative plan, and that further consultation would be forthcoming following more design work. A further response was sent after the nursery raised objections, clearly outlining that there was going to be an additional further consultation on the scheme when further design has been undertaken.

What happens now?

To summarise, the scheme is the reallocation of public highway from informal drop off space used at the start and end of the nursery day, to a measure which creates additional space for pedestrians at all times, aids crossing movements for all, including children from the nursery, and draws from a safety concern identified by the Neighbourhood Partnership.

We have now undergone informal consultation for the build out proposal that was approved through the planning process. There were 67 separate comments on the proposals with 61 objections, 5 in favour and 1 neutral.

Bearing in mind the level of objection in mind, it is proposed that the design is revisited. The new proposals will be submitted as a variation to the original condition on the planning application and officers will ensure that affected frontagers are consulted as part of this process.

Development Control Committee A – 8 July 2020 **ITEM NO. 2**

WARD: Avonmouth & Lawrence Weston

SITE ADDRESS: Land On The South East Side Of Severn Road Avonmouth Bristol

APPLICATION NO: 20/01270/F Full Planning

DETERMINATION DEADLINE: 7 July 2020

Erection of a single wind turbine, with a tip height of up to 150m, and associated infrastructure including turbine foundations and hardstanding, energy metering substation, site access and internal access track, temporary laydown area and crane hardstanding, energy learning zone, and other associated works including landscaping and ditch diversion.

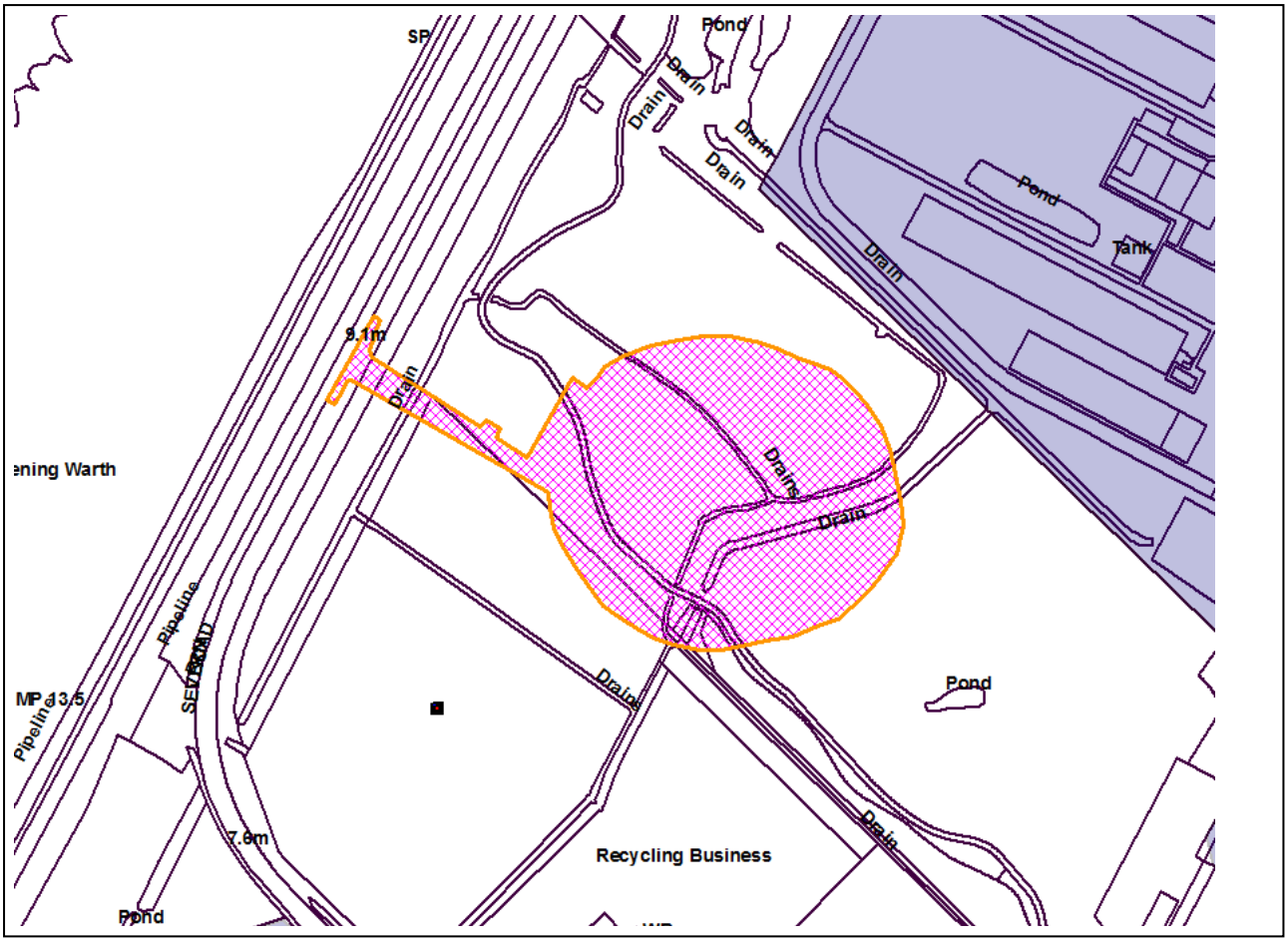
RECOMMENDATION: Refer to the Secretary of State

AGENT: Pegasus Planning Group
Pegasus House
Querns Business Centre
Whitworth Road
Cirencester
GL7 1RT

APPLICANT: Ambition Community Energy C.I.C
c/o Agent

The following plan is for illustrative purposes only, and cannot be guaranteed to be up to date.

LOCATION PLAN:



Development Control Committee A Delegated
Land On The South East Side Of Severn Road Avonmouth Bristol

SUMMARY

The application site concerns a parcel of land situated to the southeast side of Severn Road (A403), and just south of Seabank Power Station. The application has been brought forward by Ambition Community Energy C.I.C, which is a subsidiary of Ambition Lawrence Weston (ALW), a charitable organisation with residents leading its role and direction. Ambition Community Energy are proposing to install a single 150m tall (to blade tip) wind turbine which would generate an energy output of up to 4.2 MW, to be connected to the National Grid. As identified in "The Lawrence Weston Community Plan "Ambition Lawrence Weston aims to develop, inter alia, new community owned energy projects, including the proposed wind turbine, in order to generate significant financial returns for the community and lower energy bills. The applicants state that the proposed turbine will also assist in realising the aim of creating an Energy Learning Zone.

Due to the existence of a Written Ministerial Statement (June 2015), the Local Planning Authority can only grant permission for wind turbines where they are on sites which have been specifically designated for wind farm development, and where they have the support of the local community. In the case of Bristol City Council, there are currently no such allocations, therefore any decision to grant approval for this development could be at risk of legal challenge. The land designation, on which the application falls within, forms part of the Avonmouth & Kingsweston Levels which states that these areas will primarily remain underdeveloped. However forms of development suitable in open areas may be appropriate where they are consistent with other planning policies.

There is one objection to the proposal from Seabank Power Station to the north of the application site on grounds of safety and the unmitigated risks to the power station. This is in the event of catastrophic failure and the collapse of the wind turbine onto part of the power station's infrastructure. Seabank state that in such a scenario this would significantly affect output and they would be unable to provide sufficient energy generation to make up for the loss caused by the damage, with financial costs in terms of lost revenue and penalties.

Given the above issues, the application is being reported to committee in order to give the proposals the required open scrutiny and careful public consideration. It is also noted that the application has generated a significant level of local public interest in support of the plans. Despite the absence of a formal designation, it is considered that there is no reason to withhold planning permission. It is likely that Avonmouth could be considered an appropriate area for wind turbine development, in view of the fact that there are already a number of wind turbines in the locality, as well as the relative lack of sensitive receptors. The applicant's Landscape and Visual Impact Assessment also sets out that there would be no severe impact on key viewpoints including Kings Weston House.

BACKGROUND & SITE DESCRIPTION

The application site comprises of an undeveloped parcel of grass and scrubland located on the south east side of Severn Road (A403) and which is approximately 1.2 hectares in size. Seabank Power Station lies to the north and east of the application site, PR Export; an industrial recycling yard is situated to the south, with Severn Road, railway line and the Severn Estuary to the west. The site is located approximately 3 miles from Junction 18 of the M5 and 9 miles from the M4. The surrounding area is industrial in character comprised of industrial and distribution premises interspersed with green spaces. Within the immediate vicinity of the application site there are a number of energy installations including the adjacent Seabank Power Station and a Viridor energy recycling facility in the process of being constructed to the east. On land to the south of Severn Road and west of Chittening Road there are two wind turbines and a solar farm in operation.

RELEVANT PLANNING HISTORY

Historically, the site has remained in principally agricultural use, with evidence of temporary structures such as a barrage balloon mooring (World War II) in the westernmost corner, an access road to silos (circa 1965) in the south-west of the site - no evidence of either structure remains. Consequentially there are no known consented planning uses which have been identified at this site. However it was previously subject to off-site planting to mitigate against the visual impact of the development of Seabank Power Station. More recent native species tree planting in the northern field appears to be have been undertaken by the Bristol City Council (Tree Pips, Environmental Improvement team) in partnership with the Woodland Trust.

ENVIRONMENTAL IMPACT ASSESSMENT

Planning for the proposed community wind turbine falls under Schedule 2 of Environmental Impact Assessment (EIA) legislation, as an 'Installation for the harnessing of wind power for energy production (wind farms).' As such the LPA is required to screen the proposal to determine whether significant effects on the environment are likely and hence whether an EIA is required. It was therefore assumed by the applicant that EIA will be required to inform the planning application for the proposed development. The applicant formally submitted a request for an EIA Scoping Opinion to the LPA under Regulation 15 of the Town and Country Planning (Environmental Impact Assessment (England and Wales) Regulations 2017) to establish the scope of the Environmental Impact Assessment that would accompany the planning application (19/03774/SCO).

Subsequently in addition to the technical assessments in support of the planning application, an Environmental Statement (ES) has been submitted, which includes the following chapters:

- Introduction, the need for the EIA and the background behind it.
- Need, Site Selection and Design Evolution
- Project Description
- Ornithology Assessment
- Ecological Impact Assessment
- Noise Assessment
- Geo-Environmental Assessment
- Balance of Effects
- Environmental Action Plan

The conclusions under the "technical summary" considered that no significant (i.e. greater than minor) residual impacts have been identified (following application of identified mitigation measures). There is a negative residual impact relating to the local ecology. However, due to the proposed enhancements, over time it would have a residual minor adverse impact and which would be outweighed by the wider environmental benefits that will be generated by delivery of the application scheme.

EQUALITIES IMPACT ASSESSMENT

The public sector equalities duty is a material planning consideration as the duty is engaged through the public body decision making process. "S149 of the Equalities Act 2010 provides that a public authority must in the exercise of its functions have due regard to:

(a) eliminate discrimination, harassment, victimisation and any other conduct prohibited under the Act

(b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it.
(c) foster good relationships between persons who share a relevant characteristic and those who do not share it.

During the determination of this application due regard has been given to the impact of the scheme upon people who share the protected characteristics of age, disability, gender reassignment , marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. In the assessment of this application, officers are satisfied that there would not be any adverse impacts given the location and detailed design of the proposed development.

APPLICATION

Planning consent is sought for the erection of a single wind turbine comprising of a 3-bladed rotor design with a maximum hub height of 92m and a maximum blade tip height of 150m. The rotor diameter will be 115.7m. According to the applicants the proposed wind turbine is expected to have a generating capacity of approximately 4.2 MW, enough low carbon electricity to power 3,850 homes and CO2 savings of 2,162 tonnes every year over the lifetime of the development. The proposed wind turbine once in operation, would export electricity to the Western Power Distribution (WPD) network via a new cable connected from the existing WPD 11kV cable running along Severn Road. The associated infrastructure would include foundations and hardstanding, energy metering substation, site access and internal access track, temporary laydown area and crane hardstanding, and other associated works including landscaping and ditch diversion. There would also be an energy learning zone for visitors, located just west of the turbine (please see plans for details).

The applicant states that the wind turbine will be decommissioned 25 years after the date of the first exportation of electricity from the site. The wind turbine will be removed and the land restored to its pre-development condition. The applicant adds that most of the components of the wind turbine are recyclable, including the steel tower sections and the various metals in the generator.

The application includes the following documentation to enable assessment of the application:

- Environmental Statement - Volume 1
- Environmental Statement - Volume 2
- Environmental Statement - Volume 3
- Environmental Statement Non-Technical Summary
- Arboricultural Impact Assessment Report
- Aviation Risk Assessment
- Design and Access Statement
- Flood Risk Assessment (FRA)
- Heritage Desk-Based Assessment
- Landscape and Visual Impact Assessment
- Shadow Flicker Assessment
- Statement of Pre-Application Community Engagement
- Technical Report & Construction Traffic Management Plan
- Telecommunications Link Study; and
- Television Impact Assessment

PRE APPLICATION COMMUNITY INVOLVEMENT

The size and nature of the proposed development means that the application is required to be accompanied by a Statement of Community Involvement. Guidance and good practice examples

exist to inform the choice of appropriate methods in order to help ensure effective, efficient, transparent and accountable public consultation and involvement. Those responsible for undertaking community involvement are expected to reflect such good practice to ensure inclusive, fair and effective initiatives. Failure to do so may limit the validity and relative credibility of the involvement undertaken.

The application includes a statement of pre-application community engagement. This was also undertaken in the context of the Written Ministerial Statement (see Key issue A). The content of the submitted statement is summarised as follows.

i) Process - which would be NPN's CI summary

The community consultation process was undertaken in two phases with each phase involving public consultation using displays at events and community surveys/ questionnaires as the primary engagement tool to inform our proposal and plans. Phase 1 sought to demonstrate the support for a community led wind turbine project to be cited within the Avonmouth and Lawrence Weston area. This included an assessment of suitable sites. The first event took place at Avonmouth Community Centre on 11th September 2016 - "Avonmouth Make Sunday Special". Those surveyed at the event showed overwhelming support for a community led onshore wind turbine project, with 96.2% of 53 residents responding in favour. The subsequent Lawrence Weston Community Consultation Survey which was carried out between April and June 2017. Further consultation was undertaken at neighbourhood forums in Avonmouth and Lawrence Weston which included participation from two of the three local ward councillors, these where Councillor Jo Sergeant and Councillor Donald Alexander.

Phase 2 identified the suited site location and undertaking pre-planning assessments engaging statutory and non-statutory stakeholders. There were a number of public engagement events held throughout 2019. In light of the Written Ministerial Statement (2015) Ambition Lawrence Weston sought legal advice to how best to proceed with the process. The details of all the pubic consultation are appended to the pre-application community engagement.

ii) Fundamental Outcomes - Community Involvement Statement

The public consultation showed a clear indication from local residents and businesses that they support this application for a community led onshore wind renewable energy scheme. the applicant states that in taking account of specific comments they intend to explore developing the scheme to support the development of new skills and jobs though an energy learning scheme as identified in the Ambition Lawrence Weston Community Plan. Concerns over impact on ecology were raised, however the applicant states that they were reassured that full ecological assessments were being undertaken. Their views considered during the last 3-1/2 years of consultation at community events have shaped the wind turbine proposals currently under consideration. The applicant adds that they will continue to update residents and businesses and provide opportunities to openly review and discuss the proposals with them and their consultant team.

RESPONSE TO PUBLICITY AND CONSULTATION

The application was advertised by letters sent to neighbouring properties. Public notification was also by way of a site and press notice. There have been a total of 65 letters received in support of the proposals.

One letter of objection has been received from neighbouring Seabank Power Station for reasons summarised as follows. Whilst not opposed to the principle, Seabank would be supportive of the development if it could be demonstrated that the design has taken into account (i.e. by reducing its

height) the impact on Seabank's asset in the event of catastrophic failure of the proposed development; and/or sufficient contingencies are in place to ensure that any such failure would mitigate the impact - financially or otherwise.

From Seabank's perspective, it is not the case that a wind turbine is not suitable in this location, however it is that it must be shorter than proposed or located further away from the power station. Consequentially Seabank respectfully request that planning permission should only be granted for a turbine of reduced height which would result in a smaller topple and buffer zone obviating the risk to the Power Station. Failing that, Seabank request that the application is refused in order to protect the Power Station (please see key issue B for full details of the objection and the planning context).

Ward Members

Councillor Jo Sergeant (Avonmouth & Lawrence Weston) fully supports the application for the erection of a wind turbine to benefit the residents of Lawrence Weston. This is an excellent way to serve a local community, as well as being a substantial contribution towards the city's aspiration of carbon neutrality.

Councillor Matt Melias (Avonmouth & Lawrence Weston) fully supports the application, not only is it a great community initiative that will bring financial gain to the community, but it is also a good step towards the council's green targets.

OTHER COMMENTS

Arboricultural Team has commented as follows:-

Following clarification I am satisfied that no significant trees will be impacted by the proposals and I am happy with the proposed landscaping plan. Approve subject to condition for the development to be implemented fully in accordance with the landscape plan.

Landscape has commented as follows:-

The extent to which the existing primarily undeveloped status of the levels is affected by the proposal is to a significant extent a visual one - hence the requirement for verified views. The analysis of landscape effects indicates that the proposals do not in a significant way change the primarily underdeveloped status of the Avonmouth and Kingsweston Levels and neither are the other sensitivities - impact on users of National Cycle Network Route 41 and viewers of the Kingsweston House panorama – would be unduly affected. Therefore whilst it is considered that the harm would be minor at most and therefore outweigh by the wider public benefit (with reference to paragraph 196 of the NPPF 2019), it is advised that a discussion with the Friends of Kingsweston House regarding proportional compensatory mitigation for minor harm caused to the historic view would be appropriate.

Finally, the detailed proposals relating to landscape treatment and mitigation are acceptable subject to confirmation that tree losses to facilitate the scheme are replaced in accordance with the Bristol Tree Replacement Standard.

Health and Safety Executive - has commented as follows:-

Do Not Advise Against, consequently, HSE does not advise, on safety grounds, against the granting of planning permission in this case.

Flood Risk Manager has commented as follows:-

We raise no objections to the proposals as the Lower Severn Internal Drainage Board have been consulted by the applicant, with the drainage strategy being approved by the IDB.

The site Flood Risk Assessment only has a high level flood evacuation plan. However, the proposed development comprises a low-occupancy site. Therefore, if the LPA is minded to consent the application, we would recommend that planning consent is subject to a condition for the submission of a flood evacuation plan.

Avon Fire & Rescue Service has commented as follows:-

Do not wish to comment.

Sustainable Cities Team has commented as follows:-

The Written Ministerial Statement 2015 and the amendments to the NPPF essentially state that applications for 1 or more wind turbines should only be granted where the site is in an area identified as suitable in a local plan, the relevant planning impacts are addressed, and which has the backing of the community.

Policy BCS4 of the Core Strategy clearly identifies Avonmouth as a location with opportunities suitable for the development of energy from further large scale wind turbines - subject to the protection of the area's environmental assets and acknowledging development constraints. This designation is continued in the City Council's Draft Local Plan (currently at consultation stage) review Policy E5 (Avonmouth Industrial Area and Bristol Port), which can only be given minimal weight but clearly shows potential direction of travel.

Core Strategy Policy BCS14 states that proposals for the 'utilisation, distribution and development of renewable and low carbon sources of energy, including large-scale freestanding installations, will be encouraged. In assessing such proposals the environmental and economic benefits of the proposed development will be afforded significant weight, alongside considerations of public health and safety and impacts on biodiversity, landscape character, the historic environment and the residential amenity of the surrounding area'.

As such, in light of the policy context, the Sustainability team would be supportive of the proposal for a further wind turbine in principle in this location, as contribution to local renewable energy supply.

Transport Development Management has commented as follows:-

A Technical Report & Construction Traffic Management Plan has been submitted with the application which details the transport impacts of the construction and maintenance of the proposal.

Once in operation the site will generate only very infrequent visits. The turbine is set well back from Severn Road. The area has a large number of wind turbines which are not considered to cause any particular concern in terms of driver distraction, particularly given that the site is visible a long way back on the approaches and so will not surprise drivers. For this reason we have no objection to the principle of this development.

Access to the site will be via a newly formed access from Severn Road to the west of the site. Some additional widening of the access will be necessary for a temporary period during the construction phase, whereupon it will revert to its final layout on completion. Following the

submission of further information on how the access arrangements would be managed, maintained and secured, we have no objection to the proposed access providing it is secured via an appropriate highway condition.

It should be noted that the access crosses a gas pipeline and a rhine and so appropriate constructions will be required. It is assumed that the public will be able to view information at the Energy Learning Zone. A turning head will be provided to ensure vehicles can enter and leave the site in forward gear.

National Cycle Network (NCN) Route 41 runs through the site. During construction it is expected that a small element of diversion of the route will be required. However it is understood that the NCN will continue to run along its existing route following completion of the development although this should be confirmed in particular where NCN crosses the access track. Thought should also be given to whether cyclists and pedestrians will be able to use the access road to reach Severn Road in future.

Details of interim and final proposals for NCN should be agreed by condition prior to commencement.

The proposal would have no impact on the nearby private right of way (PROW).

Network Management are satisfied with the proposed methodology for construction. Agreement of a Construction Management Plan should be secured by condition.

Bristol Waste Company has commented as follows:-

This is a non-residential development therefore Bristol Waste does not have any comments on this application.

Contaminated Land Environmental Protection has commented as follows:-

Overall the reports submitted are acceptable. There were two things that were not included within the report that should be considered and would happily accept this in an email to avoid the need for a full condition.

- Gas generation from the peat deposits that were identified in the site soils and is a common issue in this area was overlooked
- This can be further impacted by the tidal groundwater fluctuation which was also not discussed. The deeper groundwater is known to be tidally influenced and in continuity with the estuary.

We do accept that there won't be any occupied structures as part of the scheme but we just need it to be acknowledged that potential risks have been considered.

Given the history of the local area we do recommend approval subject of a condition for the reporting of unexpected contamination.

Environment Agency (Sustainable Places) has commented as follows:-

We have no objections to the development, subject to the inclusion of planning conditions in any grant of planning consent for:

- The development to accord with the measures in the submitted FRA
- The reporting of any contamination not previously identified

Archaeology Team has commented as follows:-

As the submitted heritage statement for this application has demonstrated, this proposed development site lies in an area of archaeological interest relating to previous land use of this important wetland environment.

The proposed new wind turbine will have a limited archaeological impact, however, as the statement suggests archaeological monitoring of geotechnical works or associated ground works will be able mitigate these impacts through recording any disturbed archaeological deposits.

Consequently, archaeological conditions to secure the appointment of an archaeological contractor and completion of an archaeological watching brief should be attached to any consent.

Civil Aviation Authority

No comments received

Crime Reduction Unit has commented as follows:-

Having reviewed the available documentation, I do not have any specific concerns or recommendations around this application other than to suggest that, during the construction phase (should this application be granted consent), temporary surveillance cameras are used to mitigate the opportunity for theft at this stage, in what is, a relatively isolated location.

Historic England has commented as follows:-

On the basis of the information available to date, we do not wish to offer any comments. We suggest that you seek the views of your specialist conservation and archaeological advisers, as relevant.

Natural England has commented as follows:-

The application site is in close proximity to the Severn Estuary Special Protection Area (SPA) and Special Area of Conservation (SAC), which are European sites. The Severn Estuary is also listed as a Ramsar site and also notified at a national level as a Site of Special Scientific Interest (SSSI).

There is no objection to the proposals. Natural England notes that the Habitats Regulations Assessment (HRA) has not been produced by your authority, but by the applicant. We provide the following advice on the assumption that your authority intends to adopt this HRA to fulfil your duty as competent authority.

Natural England advises that we concur with the HRA conclusions that the proposed turbine will not result in any adverse effects on integrity on the Severn Estuary or on any other internationally designated sites, providing all mitigation measures are appropriately secured.

In principle, we would expect the ecological enhancement measures to result in long term ecological gains that will strengthen the contribution of the wider site to the local wildlife network.

Natural England recommends that a re-evaluation is made of the local feeding, roosting and breeding waterbird population before decommissioning of the turbine occurs.

Highways England has commented as follows:-

Raise no objection to the proposal.

Lawrence Weston Neighbourhood Planning Forum has commented as follows:-

The Lawrence Weston Planning Forum fully support this planning application. This planning application has come about by many residents supporting this project for many years. This application fits well and meets the policies in the Lawrence Weston Neighbourhood Development Plan, and is listed as an objective for local residents in their own Community Development Plan.

This also sits in line with recent Local Authority statements regarding the climate emergency, and the post covid 19 economic growth strategy. We urge the planning officer to approve this well supported by residents application.

Nature Conservation Officer has commented as follows:-

The Ornithological Assessment is well written and the survey methods and data analysis generally follow UK standard guidance in relation to birds and wind turbines, although the latter guidance note on bird survey methods to inform impact assessment of onshore wind farms was updated in 2017. Further Information is therefore required on cumulative effects and this information should not be conditioned. Mitigation proposed for ornithological impacts should all be secured through planning conditions.

With regard to the ecological surveys, no specific surveys for invasive non-native species (INNS) were conducted so a precautionary approach pre-construction should be taken. Further information is required which can be secured through condition.

Surveys for fish were not considered within the wet rhines, which is acceptable for the site, however there is a potential for European eel and juvenile lamprey species (ammocoetes) to be present within the rhine network. Further information is therefore required on the protection of fish during works which can be secured through condition.

Further information is required on pre-construction surveys for otter and water vole to ensure legal compliance and which can be secured by condition.

Further information is required on protected species (bat roosts). Further surveys for legally protected and priority species and habitats are a material planning consideration. Further information is required on bat collision mitigation and changes to landscape plan. Further information is required on the impacts on Bristol Wildlife Network with potential changes to the landscape plan.

The cumulative effects for bats in relation to the type of proposed development (turbine) have not been adequately considered. Therefore further information is required prior to determination.

Further information is required in regards to the shadow HRA in relation to site fish species, bats at screening, and in-combination affects in regards to SPA and Ramsar site bird species. This should be provided prior to determination.

On submission of the outstanding information, any approval of the application should be subject to ecological planning conditions and advices.

Network Rail has commented as follows:-

Network Rail has no objection in principle to the above proposal. But due to the proposal being next to Network Rail land and our infrastructure and to ensure that no part of the development adversely impacts the safety, operation and integrity of the operational railway, we have included

asset protection comments which the applicant is strongly recommended to action should the proposal be granted planning permission.

The local authority should include these requirements as planning conditions if these matters have not been addressed in the supporting documentation submitted with this application.

Whilst there are no objections in principle to this proposal, the applicant will need to engage with Network Rail Asset Protection, to determine if a Basic Asset Protection Agreement is required to manage the potential interfaces these works have on Network Rail assets and operations.

As with any structure to be erected adjacent to our property, Network Rail is keen to ensure that promoters of such schemes consider the constructability, structural integrity and maintainability of the proposed turbine installations when planning the scheme. A wind turbine mast is considered to be a fixed structure which, however, the wind turbine blades are clearly not fixed structures and their placement and operation needs to be considered as a specific issue.

Pollution Control has commented as follows:-

No objection. the Environmental Statement (ES) predicts that due to the nearest residential properties being 2 km away noise from construction, operation and decommissioning should not be an issue. However, I would ask that a condition on noise levels and an advice with regard to construction and decommissioning be placed on any approval.

National Grid has commented as follows:-

The Project Team have reviewed the proposed development, and are content that it would not affect any of the DCO work planned to be undertaken by National Grid.

The Port Authority has commented as follows:-

No comments received.

Lower Severn Internal Drainage Board

No comments received.

Ancient Monuments Society

No comments received.

South Gloucestershire Council has commented as follows:-

No comments received.

RELEVANT POLICIES

National Planning Policy Framework – February 2019
Bristol Local Plan comprising Core Strategy (Adopted June 2011), Site Allocations and Development Management Policies (Adopted July 2014) and (as appropriate) the Bristol Central Area Plan (Adopted March 2015) and (as appropriate) the Old Market Quarter Neighbourhood Development Plan 2016 and Lawrence Weston Neighbourhood Development Plan 2017 and the Hengrove and Whitchurch Park Neighbourhood Development Plan 2019.

In determining this application, the Local Planning Authority has had regard to all relevant policies of the Bristol Local Plan and relevant guidance.

KEY ISSUES

(A) IS THE PRINCIPLE OF DEVELOPMENT ACCEPTABLE IN THIS LOCATION?

Notwithstanding the policy context of the development as set out in key issue B onwards, the suitability of the site must be assessed against the potential use. National policies such as the National Planning Policy Framework (NPPF) and the associated National Planning Policy Guidance (NPPG), encourages the promotion of renewable energy technology. The national policy in relation to wind energy development is written in such a manner as to guide the formulation of plan policies and site allocations, rather than for assessing individual applications for such developments that have been submitted without the benefit of such policy designations.

Paragraph 154 of the NPPF (2019) states that when determining planning applications for renewable and low carbon development, local planning authorities should:

a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and

b) approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.

The NPPF at footnote 49 states – “Except for applications for the repowering of existing wind turbines, a proposed wind energy development involving one or more turbines should not be considered acceptable unless it is in an area identified as suitable for wind energy development in the development plan; and, following consultation, it can be demonstrated that the planning impacts identified by the affected local community have been fully addressed and the proposal has their backing.”

The NPPG calls for a criteria-based approach when creating local plan policies for renewable energy. Local topography and the need to protect the setting of heritage assets, as well as local amenity are seen as key considerations. The NPPG acknowledges that community initiatives are likely to play an increasingly important role and should be encouraged as a way of providing positive local benefit from renewable energy development. Further information for communities interested in developing their own initiatives is provided by the Department of Energy and Climate Change. Local planning authorities may wish to establish policies which give positive weight to renewable and low carbon energy initiatives which have clear evidence of local community involvement and leadership (Paragraph: 004 Reference ID: 5-004-20140306).

Overarching National Policy Statement for Energy (2011) (EN-1): Sets out the Government's policy for delivery of major energy infrastructure, decisions which are largely determined by the Infrastructure Planning Commission. This is within the context of its aim to cut greenhouse gas emissions by at least 80% by 2050. Paragraph 3.4.1 of EN-1 sets out the UK's commitment to sourcing 15% of its total energy (across the sectors of transport, electricity and heat) from renewable sources by the end of 2020 and new projects need to continue to come forward urgently to ensure that this target is met. It also includes a list of assessment principles common to all types of infrastructure (including health, wildlife, safety, aviation, historic environment, flood risk, noise etc.). Whilst this policy document is primarily used by the Planning Inspectorate to assess

major infrastructure projects of over 50MW, the information nonetheless provides useful guidance for smaller scale development.

The National Policy Statement (NPS) for renewable energy Infrastructure (EN-3) must be read alongside EN-1 as it provides specific policies in regard to electricity generation from renewable sources of energy including Onshore Wind, and is written in a manner which is aimed to guide LPAs in plan-making. The document also sets out that information and supporting documents for planning applications must be consistent with the instructions and guidance in the NPS and EN-1.

Written ministerial statement (HCWS42)

The Government issued a Written Ministerial Statement (WMS) on 18 June 2015, which sets out revised considerations to be applied to planning decisions for wind energy development. It says that in determining planning applications for wind energy development, LPAs should only grant planning permission if:

- The development site is in an area identified as suitable for wind energy development in a Local or Neighbourhood Plan; and

- Following consultation, it can be demonstrated that the planning impacts identified by affected local communities have been fully addressed and therefore the proposal has their backing.

The WMS contains advice on what an LPA should do if a valid application for a wind energy development has already been submitted to an LPA, and the development plan does not identify suitable sites. In this situation, it states that the LPA can only find the proposal acceptable if, following consultation, they are satisfied it has addressed the planning impacts identified by affected communities and therefore has their backing. The WMS is given significant weight in this assessment, in the policy context below.

The subsequent amendment to the NPPF follows the Written Ministerial Statement of 18 June 2015 which altered the Government's policy position with regard to wind turbines.

Bristol local plan policy

Whilst Bristol does not have any specific site allocations for wind energy development, either through the Local Plan or through Neighbourhood Plans, the Core Strategy includes reference to the Avonmouth and Bristol Port area being suitable for wind energy. Policy BCS4 (Avonmouth and Bristol Port) states that; "Avonmouth is identified by the Bristol Citywide Sustainable Energy Study as having significant potential for renewable and low carbon energy installations - for example, wind, biomass and waste to energy. Whilst this strategy encourages these types of environmental technologies, proposals will be expected to demonstrate how they protect the area's environmental assets and, specifically, comply with the Habitats Regulations to avoid significant adverse effect on the Severn Estuary."

Policy DM18 of the Site Allocations and Development Management Policies states that the levels will remain primarily undeveloped. However it adds that development proposals consistent with the area's undeveloped status may be acceptable where they would be in accordance with all other relevant development plan policies. With regard to the NPPF, policy DM18 and the resulting land designation has determined that this parcel of land is not of the highest quality or economic benefit, therefore its loss to development may be acceptable to the aforementioned criterion.

Lawrence Weston Neighbourhood Development Plan (March 2017)

The Neighbourhood Plan addresses land use and planning related issues of the Lawrence Weston Community Plan. In terms of renewable and low carbon energy and in particular wind turbines, Section 5 (in setting out the challenges and opportunities derived from the evidence base) identifies 'Opportunities for renewable energy, particularly close-community CCHP / DH, and support for renewables in the immediately adjacent neighbourhoods' (Paragraph 5.3).

The applicant's justification in response to the policies

The Planning Statement explains that the nature of the proposal is such that it is required to be sited in an open area and that the merits of the proposed development are consistent with other planning policies in the Development Plan to ensure compliance with Policy DM18. Paragraphs 2.38 to 2.49 of the Environmental Statement (volume 1) set out the rationale behind why Ambition Community Energy considered this to be the most appropriate site and why a number of alternative sites and layouts were discounted. To summarise, the applicant explained that the selection of renewable energy technology was driven by the aim to maximise delivery of local community financial benefits and hence economic factors such as the cost of energy prevailed. It was also decided that only a utility scale energy project could justify the likely effort to develop and deliver the project. The cost of energy required subsidies to be economical and these subsidies were declining in value. It was therefore decided to investigate the feasibility of a utility scale wind power project.

With regards to the choice of site, Ambition Energy took over a project funded by the Department of Energy Climate Change (DECC) which had created a database of 252 Bristol City Council owned properties / land and screened them for potential to install a medium scale (approximately 100 to 500 kW) wind turbine. Preliminary estimates of wind speed at the probable hub height of a turbine were considered vital and this ruled out a number of sites as unviable. Wind speed contour maps were derived covering some 75sq km which indicated wind speeds meeting the criterion may occur close to the Severn Estuary. Inland only hilly locations showed acceptable wind speeds, and these areas were generally rejected according to other criteria. Further technical work decreased the choice of site down to six locations in the Avonmouth area. Out of those the land adjacent to Seabank Power Station was the most viable given the highest wind speed, space available likely to be suitable for a wind turbine, good access, and wind turbines in the locality.

The Planning Statement adds that the proposed development will located alongside existing commercial and industrial developments in the area and will be seen in that context and in terms of built form it will take up relatively little space within the site given its vertical form. As mentioned, for the proposal to be acceptable in detail it needs to be demonstrated that it can satisfactorily address the requirements of local planning policy in relation to the open space, biodiversity/wildlife and flood risk, as well as further planning matters. Any harm which is found as a result of development on the Levels must be suitably mitigated. This is set out in more details in the following key issues below.

The Planning Statement also makes reference to the emerging planning policy, citing draft policy E5 (Avonmouth Industrial Area and Bristol Port). This states that the area will also continue to provide a suitable location in principle for the development of large scale wind turbines. It identifies around 60 hectares of greenfield land adjacent to existing industrial areas that could provide allocations for such development. This includes land to the south of Seabank Power Station of which the application site falls within. Whilst only limited weight can currently be given due to the current stage of the local plan review, it nevertheless gives a clear direction of travel and the council’s intention to allocate sites such as this for the purposes of wind power renewable energy.

The council's legal advice is that the current local plan polices do not hold the same weight as a specific allocation. In the context of the WMS, the absence of allocated sites for wind energy means that any planning permission granted for such development would not fully align with

national policy and therefore there is a risk of challenge. Because of this, it is therefore necessary to set out that the planning impacts have been fully addressed. However the proposed development does have strong local support and represents a sustainable development.

The consultation response has clearly indicated that there is much local support for the proposed development, with one objection regarding concerns relating the risk of turbine collapse and the any potential damage that may be inflicted on the infrastructure of the neighbouring Seabank power Station. This is assessed further in the key issues below.

Policy BCS4 does indicate that Avonmouth is viewed as an appropriate location for wind turbines due to its open-ness and relative absence of nearby sensitive uses, and the area has seen the most significant development of these facilities for recent years. Consideration also needs to be given, however, to the impact on wildlife, as well as other material planning implications.

(B) IS THE INSTALLATION OF THE WIND TURBINE AS A FLEXIBLE GENERATION FACILITY ACCEPTABLE IN TERMS OF SUSTAINABILITY AND CLIMATE CHANGE?

As discussed, the National Planning Policy Framework (NPPF) says that Local Planning Authorities 'should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood planning' (paragraph 152).

It is noted that the national carbon reduction target - that 'the net UK carbon account for the year 2050' is at least 100% below the 1990 baseline' - is provided by the Climate Change Act 2008 (as amended). The Reducing UK emissions - 2019 Progress Report to Parliament, published in July 2019, highlights that UK greenhouse gases emissions fell by 2.3% in 2018 and have fallen 40% since 1990. In terms of priorities and milestones to prepare for a net-zero target, a long-term milestone is to provide 320 TWh of low-carbon energy generation by 2030 and 99-100% low-carbon generation by 2050.

According to the Planning Statement, the publications above outline the immediate and pressing need for the deployment of renewable energy generation in the UK, which is derived from the legally binding obligation in relation to the generation of 15% of energy consumption from renewable sources by 2020 initially and thereafter to meet more challenging targets by 2030 and 2050. As such the applicant adds that these are all significant material considerations in favour of this application.

Policy BCS13 of the Core Strategy requires development to contribute to both mitigating and adapting to climate change, and to meeting targets to reduce carbon dioxide emissions. The various measures by which development can do this include the use of decentralised, renewable and low-carbon energy supply systems. New development should demonstrate through Sustainability Statements how it would contribute to mitigating and adapting to climate change and to meeting targets to reduce carbon dioxide emissions through the use of such measures.

Policy BCS14 states that proposals for the 'utilisation, distribution and development of renewable and low carbon sources of energy, including large-scale freestanding installations, will be encouraged. In assessing such proposals the environmental and economic benefits of the proposed development will be afforded significant weight, alongside considerations of public health and safety and impacts on biodiversity, landscape character, the historic environment and the residential amenity of the surrounding area'.

In November 2018, full Council passed a motion which called upon the Mayor to declare a Climate Emergency and pledge to make the city of Bristol carbon neutral by 2030. The Mayor confirmed

the climate emergency and formally adopted this goal in July 2019. This declaration provides further context for the emerging local plan which is currently going through the review. Following this Bristol's One City Climate Strategy was launched by the One City Environmental Sustainability Board on 26 February 2020, which describes a pathway for Bristol to become carbon neutral and climate resilient by 2030. Part of the strategy includes making the city's electricity use as smart and flexible as possible (to support electricity decarbonisation nationally), maximise local renewable energy generation and increase system resilience (One City Climate Strategy).

On considering the detail of the application and in light of the above policy context the Sustainability Team are supportive of the proposal for a wind turbine in this location, as contribution to local renewable energy supply.

Officers recommend that the acceptability of the proposed development should therefore be determined on the basis of its wider environmental impact in the proposed location, in accordance with other policies of the Local Plan and national planning policy.

(C) DOES THE PROPOSAL RAISE ANY CONCERNS IN REAGRDS TO HEALTH AND SAFETY ISSUES?

EN-1 acknowledges that energy production has the potential to impact on the health and well-being of the population. EN-1 also recognises that that access to energy is also beneficial to society and to health as a whole. However, EN-1 does state that where the proposed project has an effect on human beings, the ES should assess these effects for each element of the project identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate.

According to the companion guide to PPS22 there have been no reported examples of injury to members of the public from wind turbines. The most likely source of danger to human or animal life from a wind turbine would be the loss of a piece of the blade or, in most exceptional circumstances, of the whole blade. The blades are however composite structures with no bolts or other separate
components and failure is therefore most unlikely.

Wind Turbine collapse/safety

The minimum desirable distance between wind turbines and occupied buildings calculated on the basis of expected noise levels and visual impact will often be greater than that necessary to meet safety requirements. Nonetheless the NPPG states that "fall over distance (i.e. the height of the turbine to the tip of the blade) plus 10% is often used as a safe separation distance" (Paragraph: 016 Reference ID: 5-016-20140306), which in this case equates to 165 metres. There are no residential dwellings within the vicinity and therefore the threat of turbine collapse is not an issue in respect of the wider public.

However, Seabank Power Station has lodged an objection on the grounds that that the turbine as proposed in the application will not achieve the safe separation distance specified in NPPG, and therefore in the event of catastrophic failure of the turbine (i.e. collapse), there is a risk that the turbine would damage the power station and therefore lead to substantial financial loss. Specifically Seabank have identified one of their cooling towers that would fall within the topple-over distance. Whilst Seabank do not specify the distance between their cooling tower and the proposed wind turbine, officers put this distance at approximately 160 metres. The cooling tower in question stands some 12m in height and would sustain significant damage should a toppling turbine of 150m in height fall in a north-easterly direction. Seabank consider that given that the prevailing winds off the Severn come from a south-westerly direction (as indicated by the general orientation of the turbines further south), this is more likely that it toppling over into on assets than

in any other direction. The potential catastrophic failure of the proposed wind turbine could severely damage the cooling tower and cause injury to staff.

Seabank state that this asset is part of critical national infrastructure, producing 769MW at full output. They advise that it would likely take at least 9 months to recover from such a scenario. This would result in a substantial commercial loss to Seabank from being able to fulfil energy contacts to both their customer and under the Capacity Market commitments to the National Grid. Seabank Power Station has been in operation for 20 years and is connected to the National Grid providing electricity for over 1 million homes.

Seabank advise that during the pre-application discussions in 2019, the applicant provided them with the aerial photograph that showed, through a series of blue concentric circles, the indicative location of the turbine, the notional topple zone plus a 10% buffer zone. Seabank state that the epicentre of the proposed turbine was located further south on the aerial photograph than the application site location plan (and thus further away) from the boundary of the power station. The application draws the inner circle closer to the boundary of the power station and thus the topple zone encroaches further into the Power Station site. Seabank Power Station add that an equivalent plan is conspicuously absent from the application.

With regard to the existing wind turbines, Seabank state the comparable turbines listed in the Design & Access Statement (DAS) and Planning Statement (PS) are no taller than a tip height of 131m. The proposal therefore is variously between 19m and 83m taller than the comparable installations. Seabank add that The DAS and PS both largely ignore the Power Station whilst being more specific in terms of the proposed height of the turbine than the development description. In particular, the DAS ignores the Power Station in terms of consideration of layout and scale.

In reference to the Written Ministerial Statement (WMS) and with reference to footnote 49 of the NPPF, Seabank Power Station argue that they are very much part of the local community and the planning impacts identified in their letter have not been fully addressed or mitigated. As such, the proposal does not have Seabank's backing. They add that whilst the LPA may consider flexibility in respect of the consideration of the topple and buffer zones, it is necessary to exercise a rigid approach to the safety of the Power Station for the reasons stated. Reference is made to policy BCS4 which according to Seabank clearly sets out that whilst opportunities for the development of wind turbines may arise, they will have to take into account physical constraints – the power station being one. As such Seabank Power Station consider that the material considerations of the proposal do not outweigh the safety aspect associated with the scale of the turbine and its proximity to the active power station should it catastrophically fail and damage or destroy parts of the power station.

In response the applicant has provided details of the turbine specification as part of their technical response and a risk assessment. The findings based on technical calculations conclude that the probability of the wind turbine structure collapsing is put at once in every 100,000 years. Whilst the probability of structure topple directly impacting on the Seabank's cooling plant is calculated to have a probability of occurrence of once in every 500,000 years. The applicant adds that wind turbines are now highly reliable devices which are designed and built using exacting and internationally recognised standards. There have been no known incidents of turbine collapse anywhere in the United Kingdom. Existing set-back guidance is based on work and standards of some 26 years ago when wind turbines were in their very early stage of development and deployment. Guidance therefore must be applied with this in mind.

The applicant has stated that in the event of a direct hit that only the outer portion of the blade would make contact with the structure. There would be no impact of the turbine tower or the nacelle on the Cooling Plant. As such the applicants assert that the loss could be made up by the

undamaged part of the plant. Following considerations of the applicant's response and following a further meeting between Seabank and the applicant, Seabank Power Station have upheld their objection.

It is noted that both Ambition Community Energy and Seabank Power Station are in agreement that the facility would fall within the topple zone. Seabank have not appeared to dispute that the risk of catastrophic failure of the turbine (i.e. collapse) would be extremely low (1:500,000 years). Both Ambition and Seabank agree that there is a risk in the event of turbine collapse, and that it would fall on one of the cooling towers and potentially disable it (SB1), with SB2 remaining operational.

However Seabank do not concur with Ambition's view that the NPPG should not be given significant weight and it in fact remains current guidance and it therefore material in refusing the application. There is disagreement over how likely the wind turbine would hit Seabank and if it did, as to the extent of physical damage that would result. There is disagreement between Ambition and Seabank over the financial consequences that would be incurred on Seabank in the event of damage with Ambition quoting a significant lower figure (£4m) compared to Seabank (£15m). Seabank assert that the applicants do not understand how the market capacity works and therefore their figures should be discounted on the grounds that they are factually incorrect. Ambition argue that that consent for their proposed wind turbine would be consistent with the LPA's decision to approve other turbines in the locality, and that consistency in decision making requires a grant of approval in this case. However it is considered that these earlier examples are different from the present proposal, and crucially the comparable decisions can be distinguished materially from the present application, which involves "nationally critical infrastructure". None of the existing wind turbines would have the potential of catastrophic failure to damage a power station.

Safety – the planning balance

On considering the above, officers agree that the NPPF and the NPPG (which informs through the further explanation, the objectives of the NPPF), remains current and should be given significant weight in the consideration of the application in regards to safety. It is noted that the NPPG sets out the topple height plus 10% buffer that should be considered. However the guidance is not mandatory and that this requirement can in appropriate circumstances be set aside with reference to other material factors. Officers note the NPPG adds that "Local planning authorities should not rule out otherwise acceptable renewable energy developments through inflexible rules on buffer zones or separation distances. Other than when dealing with setback distances for safety, distance of itself does not necessarily determine whether the impact of a proposal is unacceptable. Distance plays a part, but so does the local context including factors such as topography, the local environment and near-by land uses. This is why it is important to think about in what circumstances proposals are likely to be acceptable and plan on this basis" (Paragraph: 008 Reference ID: 5-008-20140306).

Given the wording of the NPPG above, there is a difference opinion between the Council's legal opinion and that of the objector (Seabank) as to whether or not distance is a determinate factor when considering safety. Given the legal advice this report has been written on the basis that the Local Planning Authority are able to take into account other material considerations when determining the application. However, Officers are seeking further advice on this specific point, and Members will be updated in the update report.

Officers note that the potential collapse of the wind turbine would pose a safety risk to staff at Seabank Power Station in terms of injury. Furthermore this could incur severe financial cost on them at much higher cost that Ambition Community Energy has argued. The figure in the region of £15m in addition to the forfeiture of Capacity Market income, and regardless of the Capacity

Market clearing price. Seabank suggest a compensation arrangement which as they acknowledge could not be reasonable secured through the planning process. Notwithstanding this, Seabank also acknowledge that this mechanism would not be economically viable or desirable for Ambition. Both Ambition and Seabank Power Station could negotiate the matter of potential damage and the associated financial costs with their respective energy insurers, although again that is outside the scope of planning jurisdiction.

Notwithstanding these considerations, the information from the applicant's technical response and risk assessment have concluded that the risk of turbine collapse would be extremely low, a conclusion which is not disputed by Seabank Power Station. Officers note that there is urgency for renewable energy projects to be bought forward to ensure that the UK can meet the Climate Change Act 2008 (2050 Target Amendment) Order 2019. This amendment, which came into force on the 27 June 2019, introduced a target for 100% reduction in greenhouse gas emissions (against 1990 levels) in the UK by 2050 (net zero). The above very much needs to be taken into consideration as "material factors" in assessing the safety aspects in accordance with the NPPG.

In conclusion on this issue, it is clear that, due the height of the turbine, the design of the proposal does not fully mitigate the potential risks associated with the proposed development. However, officers are of the view based on the policy, that this in and of itself is not the determining factor, and the Local Planning Authority can take into account the other material considerations, including the significant public benefits. However, in coming to that decision the Local Planning Authority has to demonstrate that the risks associated with the development have been properly assessed. Risk is a product of the likelihood of an event and the consequences of that event. Whilst all parties are agreed that the likelihood of the event is very low, there is disagreement regarding the potential consequences, and it appears to be the case that the applicant has underestimated the potential consequences. Notwithstanding this, given the likelihood of the event and the significant benefits offered by the development, officers consider that the proposal can be supported.

Health and Safety Executive (HSE)

The Health and Safety Executive (HSE) has confirmed that it does not wish to be consulted on wind turbines and wind farm developments in the vicinity of other major hazard sites and major hazard pipelines, as they are not a relevant development under the Town and Country Planning (Development Management Procedure) (England) Order 2015, and will not lead to a material increase in the number of people in the vicinity of the major hazard.

(D) DOES THE PROPOSED DEVELOPMENT ADEQUATELY ASSESS THE ECOLOGICAL IMPACTS?

A core planning principle of the NPPF (para 17, bullet point 7) is that the planning system should contribute to conserving and enhancing the natural environment. The NPPF states, inter alia, that minimising impacts on biodiversity and providing net gains in biodiversity where possible, contribute to the Government's commitment to halt the overall decline in biodiversity (para 109 bullet point 3). The NPPF also states that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying a number of principles (para 118).

Core Strategy policy BCS4 describes the environmental assets within the Avonmouth area. The Severn Estuary has internationally important habitats which support important populations of waterfowl, waders invertebrates and fish. The site is located next to the Severn Estuary Special Protection Area (SPA); the Severn Estuary Ramsar Site; the Severn Estuary Special Area of Conservation (SAC); and the Severn Estuary Site of Special Scientific Interest (SSSI). Consequently Policy DM19 of the Site Allocations and Development Management Policies applies.

It states that Development which would have a harmful impact on the connectivity and function of sites in Wildlife Corridors will only be permitted where the loss in connectivity, or function, of an existing Wildlife Corridor is mitigated in line with the following hierarchy:
a. Creation of a new wildlife corridor within the development site;
b. Enhancement of an existing corridor or creation of a new corridor off-site to maintain the connectivity of the Bristol Wildlife Network.'

It adds that Development should integrate existing wildlife corridors. Where this is not practicable it should provide suitable mitigation in the form of on-site, functional Wildlife Corridor(s). Development should also provide mitigation for any habitats, species or features of value associated with the Wildlife Corridors, where they are harmed or lost. This should take place on the development site wherever possible.'

The applicant states that the site is located in an area of poor semi-improved grassland with substantial areas of bramble scrub and ruderal vegetation. Hedgerows with associated wet and dry ditches bound the land parcels within which the proposed development lies. Nonetheless the application site is located within the Bristol Wildlife Network, which is designated under the above planning policies. Due to the proximity of the proposed development to the Severn Estuary, it has potential to affect the designated national and international features of nature conservation interest. In particular the development has the potential to adversely affect populations of bird species associated with the Severn Estuary national and European protected site in terms of potential collision risk and/or displacement effects. Furthermore, the turbine is located in an area of significant ornithological interest, with the Severn Estuary European Marine Site being located approximately 60 m to the west.

These locations provide supporting habitat that are protected under the Conservation of Habitats and Species Regulations 2010 (Habitats Regulations) as amended. The Habitats Regulations Assessment (HRA) in respect of the planning application needs to address the potential for the disturbance of qualifying interest feature birds from collisions with the turbine including an analysis of bird flight-lines and noisy activities such as percussive piling during its construction. Bristol City Council is the ‘competent authority’ under the Habitats Regulations and must consider the protection afforded to the European sites when determining planning applications. Some of the sites in question are also Ramsar sites and, as a matter of national planning policy, these must be treated by the competent authority in the same way as European sites. It was established as part of pre-applications discussions that a shadow Habitats Regulations Assessment (HRA) report will need to be provided by the applicant.

The submitted Environment Statement (ES) included surveys that found habitats present within the application site such as the hedgerows, trees and scrub have the potential to support protected species such reptiles and foraging bats. Seven species of bat were recorded foraging and commuting within the site but overall bat activity levels were low across the surveyed area with the greatest activity noted along the boundary features to the south. Although no badger setts were located within the site, there was evidence of badger activity in the wider area. No evidence of water voles or great crested newt was found. Surveys spanning a two year period were undertaken to inform the assessment of potential impacts on birds. The surveys identified both patterns of waterbirds' use of the adjacent estuary foreshore and flight paths across the application site.

The surveys found that the airspace above the proposed wind turbine is not subject to high levels of flight activity and does not form a regular route for waterbird species. The results of the flight activity survey were used to inform a Collision Risk Model, which concluded that the proposed wind turbine is very unlikely to affect the waterbird interest of the Severn Estuary with no significant impact predicted.

In view of the risk of bats colliding with the wind turbine, which would affect the population at a county level, the applicant states that features that could be used by bats will be removed from the vicinity of the turbine and reinstated elsewhere in the wider project area. The measures proposed would include the removal of hedgerow, tree lines, broad-leaved woodland and scrub. It would also include diverting the wet ditch currently approximately 12 m to the south of the turbine location. Therefore mitigation to discourage bats from using area around 25m of the turbine has been incorporated within the landscape plan and which can be secured by condition as part of any planning consent. The turbine will be rigorously monitored to identify any impacts on bats in accordance with a strategy to be agreed with Bristol City Council and Natural England.

The statement concludes that no residual cumulative ecological effects with other developments are anticipated. The development will offer positive opportunities for ecological enhancement of the site and the Bristol Wildlife Network. Whilst a strict Monitoring Strategy will be prepared and implemented to monitor any collision or disturbance effects and to provide information to inform future wind energy projects.

On reviewing the supporting documentation, the Council's Ecology Consultant was broadly supportive of the findings. However it was considered that that further survey information was requested in relation to the bat survey and associated documentation, amendments to the findings of the submitted ornithological Assessment, Ecological Assessment and Shadow HRA.

In response to this, the applicant has provided a comprehensive response to the request for further clarification and information. The applicant has also submitted an updated Shadow HRA and an addendum to ES Ecology chapter to address the outstanding queries from the Council's Ecology Consultant.

Following further consideration the Council’s ecological consultant welcomed the additional information and clarification with the cumulative impact assessment (EIA) and in-combination effects (shadow HRA), also the additional text in the main text of the Shadow HRA. Officers also agreed with conclusions drawn from this additional in-combination assessment, along with the addendum to the ES ecology chapter for completeness. Officers also welcomed the consideration of Eels and fish protection, this has been included in the shadow HRA mitigation. Given this officers are satisfied with the applicant’s HRA. The additional bat report and findings were also welcome, and consultation with natural England should be sought if the final findings for the emergence/re-entry surveys on the dead monolith with high potential conclude that to be a roost. However the Council’s ecological consultant is satisfied that this can be secured as part of the applicant’s bat monitoring strategy which will be secured by condition.

It is noted that both the Council's Ecology Consultant, and Natural England, raised no objections in principle on ecological grounds. It is recommended that a number of ecological conditions should be attached as part of any planning approval, including the requirement to submit an ecological monitoring strategy to monitor the continued impact of the turbine on birds in the area. A further condition shall be imposed requiring the turbine to be removed and decommissioned at the end of its working life. This is commensurate with aspirations within the submission - the turbine is proposed to be removed after 25 years. At the time of this report the exact wording of the required conditions are still to be agreed and finalised, and therefore will be reported under the amendment sheet.

(E) WOULD THE APPLICATION MAKE AN ADEQUATE DESIGN AND CONSERVATION RESPONSE, INCLUDING IMPACT ON KEY VIEWS?

Section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 states that in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority shall have special regard to the desirability of preserving

the building or its setting or any features of special architectural or historic interest which it possesses. The Authority is also required (under Section 72 of the Planning (Listed Buildings and Conservation Areas) Act 1990) to pay special attention to the desirability of preserving or enhancing the character or appearance of the conservation area.

This is relevant here because the development would affect the setting of the nearby Grade I listed Kings Weston House and its surrounding historic landscape, including the Kingsweston and Trym Valley Conservation Area. Section 12 of the national guidance within the National Planning Policy Framework (NPPF) 2012 states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation, with any harm or loss requiring clear and convincing justification. BCS22 requires developments to safeguard or enhance heritage assets.

The application site itself falls within designated area of the Avonmouth and Kingsweston Levels, currently protected under policy DM18. This policy is intended to preserve the undeveloped status of the levels by use of the term "primarily underdeveloped" and the rider that development consistent with the areas undeveloped status may be acceptable. Requiring good design is at the heart of National and Bristol planning policy, and policy BCS21 expects a high quality design in all developments, which contributes positively to an area's character and identity, creating or reinforcing local distinctiveness.

The application is accompanied by a comprehensive Landscape and Visual Impact Assessment (LVIA), which contains existing photos with comparison CGI images of the development in place. The range of viewpoints was established during the scoping opinion that was carried out for the site. The submitted LVIA considers the effect that the turbines will have on the local landscape and the people who regularly view it. The assessment is a comprehensive study that establishes a baseline for the landscape character of the area and the visual environment and projects the impact that the proposal will have on these 'receptors'.

Viewpoints were taken from 16 different locations (receptors) which were selected to provide a representative sample and spread of typical views towards the site, in locations including Kingsweston House and Avonmouth. Close range views within the site are afforded from National Cycle Route 41. Local views beyond the site were taken from roads and footpaths/ cycle ways and the Severn Way in the context of the existing industrial infrastructure and wind turbines. Medium distance views, from low-lying farmland, villages and lanes to the east and northeast are frequently curtailed by the network of hedgerows and trees together with structures associated with the railway and motorway network. Elevated views were taken to the south and east from long distance trails on Spaniorum Hill and the Kings Weston Ridge. Other elevated views were taken from the M5 flyover and higher parts of Lawrence Weston. Distant views were taken from South Wales, across the Severn Estuary to the north and north-west, and elevated areas of Portishead to the south-west.

The applicant asserts that the assessment identified that the landscape surrounding the application site is dominated by the industrial area of Severnside, a large-scale landscape comprising expansive lowland dominated by industrial sites which often contain large-scale structures such as chimneys, tanks, silo, warehouses and manufacturing plants, together with existing wind turbines.

On reviewing the assessment including the viewpoints, the rural character of the Avonmouth and Kingsweston Levels is evident in the closest and most sensitive viewpoint. The turbine would be the dominant structure within the view. However officers consider that the degree of harm arising from the proposal is highly debateable; the sensitivity of the site - value and receptor - is high and the magnitude of the development is also high, suggesting a high overall impact.

At 150m in height to the blade tip the proposed wind turbine would be at least 18m higher than any of the surrounding wind turbines within the vicinity. However it is considered that the proposed turbine lacks mass within the view, and therefore does not significantly change the open rural character of the landscape context. Consequentially officers conclude that the above analysis of landscape effects indicates that the proposal does not in a significant way change the primarily underdeveloped status of the Avonmouth and Kingsweston Levels and neither are the other sensitivities - impact on users of National Cycle Network Route 41 and viewers of the Kingsweston House panorama unduly affected. The Landscape Officer is of the opinion however that a discussion with the Friends of Kingsweston House regarding proportional compensatory mitigation for minor harm caused to the historic view would be appropriate.

The findings of the LVIA inform that at the longer viewpoints the proposed turbine would be readily apparent and difficult not to notice, but would not dominate the field of view even given the height in comparison to the established wind turbines. This, as stated above, is against the backdrop of the industrial landscape which is tolerant to change and already influenced by the industrial landscape that dominates at Avonmouth Docks. It is therefore considered that there would be minimal harm inflicted on the setting of Kings Weston House or the Kingsweston and Trym Valley Conservation Area, but that the wider public benefits of introducing a renewable energy resource would outweigh this less than substantial harm. This would fully accord with paragraphs 193 and 196 of the NPPF (2019).

The planning application is accompanied by a Heritage Desk-Based Assessment, which covers archaeological and heritage considerations. The closest Scheduled Monument is a heavy anti-aircraft battery, situated at Hallen Marsh, approximately 1.5km south-west from the site and the closest Listed Building is the Grade II Listed Hallen War Memorial, approximately 2.7km south-east from the site. The Heritage Assessment also considers potential non-physical effects upon the significance of susceptible heritage assets within the site environs. Non-physical effects are those that derive from changes to the setting of heritage assets as a result of the proposal. The assessment identifies that the site itself lies within the developed industrial zone, adjacent to Seabank Power Station and existing wind turbines. Accordingly, it is concluded that the proposed development will not have any non-physical impact on designated heritage assets within the wider landscape or their significance as a result of a change to their settings.

The detailed proposals relating to landscape treatment and mitigation are considered to be acceptable subject to confirmation that tree losses to facilitate the scheme are replaced in accordance with the Bristol Tree Replacement Standard. With regard to this the Council's Arboriculture Officer is satisfied that no significant trees will be impacted by the proposals and that the proposed landscaping plan in terms of mitigation would be acceptable.

Given the above considerations it is concluded that the visual impact of the proposed wind turbine would be acceptable in its context.

(F) WOULD THE PROPSOED DEVELOPMENT HAVE ANY ADVERSE IMPACTS ON THE AMENITY OF ADJOINING OCCUPIERS?

Policy BCS23 of the Core Strategy requires development to be sited and designed in a way as to avoid adversely impacting upon the amenity of areas by virtue of noise, vibration, smells and light. The erection of a wind turbine has the potential to have a negative impact from noise and shadow flicker. EN-3 makes specific reference to shadow flicker in respect of on-shore wind and states that where wind turbines are proposed within a distance equating to 10 x the rotor diameter from an occupied building a shadow flicker assessment should be carried out.

Noise

The applicant has undertaken a noise assessment for the construction, operational and decommissioning phases of the proposed development. The details of this are set out under chapter 6 of the Environmental Statement submitted with the planning application. This confirms that construction noise will be limited in duration and confined to working hours to be agreed with the LPA. The effect of operational noise has been assessed and the noise limits have been calculated for the relevant noise-sensitive receptors, and predictions made based on the turbine type. The predicted noise levels are calculated to be below the cumulative noise limits and therefore the effect of operational noise is not significant. In terms of noise during decommissioning, the applicant states that it will be managed to ensure compliance with best practice, legislation and guidelines current at the time in order to ensure that effects are not significant.

On considering the application the Council's Pollution Control Officers are satisfied with the information and considered that noise from the development would not harm amenity of sensitive receptors. A condition will be attached to the decision to ensure that the noise levels stated in the report will be complied and would not exceed the acceptable limits.

Shadow flicker

A Shadow Flicker Impact Assessment and Mitigation Protocol have been prepared by the applicant and the details from part of the ES. the shadow flicker analysis concludes that no dwelling houses would be impacted from the blades of the turbines. The report advises that shadow flicker effects are only possible if there is an unobstructed path from the turbine to a window. There is no requirement to assess the impact of shadow flicker upon any of the nearby industrial or commercial properties.

(G) DOES THE PROPOSAL ADEQUATELY ADDRESS ISSUES OF FLOOD RISK?

The proposal site is located within an area at risk of flooding - Flood Risk Zone 3a - as identified by the Environment Agency. The main flood risk to the proposed development is the tidal flood risk from the Severn Estuary that is located to the west of the site. The NPPF advises development to be directed away from areas of high flood risk. In accordance with the NPPF, the Bristol Core Strategy policy BCS16 requires a sequential, risk-based approach to the location of development to avoid flood risk and to manage any residual risk.

The applicant states that the sequential test has been covered in their other documents that were submitted as part of the planning application, notably in volume 1 of their Environmental Statement (ES). Of the 5 alternative sites to this one that were identified all had a number of operations deficiencies with regard to required wind speed, proximity of other structures, the proximity of the M49 and poor accessibility.

Paragraph 159 of the NNP states that if it is not possible for development to be located in zones with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification set out in national planning guidance. The NPPF sets out a matrix indicating the types of development that are acceptable in different Flood Zones. The proposed development is a wind turbine which is classified within the NPPF as being ‘essential infrastructure’. The site is located in Flood Zone 3a which is appropriate for essential infrastructure and the Exception Test is required. For the exception test to be passed it should be demonstrated that:

(a) the development would provide wider sustainability benefits to the community that

outweigh the flood risk; and

(b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.
The Flood Risk Assessment (FRA) and content of the supporting technical documents demonstrates that the proposed wind turbine satisfy part b of the test. The issue of the wider sustainability benefits of the proposal are set out in the applicant's planning statement.

The accompanied Flood Risk Assessment (FRA) states that flood defences are also proposed to be installed by the ASEA Flood Defence project, which will protect the site. The FRA states that flood resistance measures would be utilised, with all sensitive electronic equipment protected up to the 0.5% AEP coastal flood level, plus an allowance for climate change and a sufficient freeboard. In terms of risk from all other flood sources, the FRA explains that the level of risk is considered to be low to negligible.

With regard to drainage surface it is proposed that a dry rhine reach will be filled in and another Rhine onsite will be diverted. These proposals would be subject to the consent of the lower Severn Internal Drainage Board (IDB). A culvert is also proposed for the Rhine located below the access road, which has been approved by the IDB. Surface water runoff will be managed sustainably by using a grass filter strip around the wind turbine platform. A full drainage maintenance regime will be implemented.

Neither the Environment Agency nor the Council's Flood Team has raised objections to the proposal subject to condition as part of any grant to approve the application.

Given the above it is concluded that the proposal would address issues of flood risk.

(H) WOULD THE PROPOSAL SATISFACTORILY ADDRESS ISSUES OF MOVEMENT AND TRANSPORT?

Fundamental transport and movement objectives of the local plan include promoting means of travel other than the car, such as cycling, walking and public transport, and also reducing dependence on the private car. Policies BCS10 is particularly relevant in achieving this objective.

The planning application is accompanied by a Construction Traffic Management Plan (CTMP). It explains that access to the site will be via a new access to be constructed off of the A403 Severn Road. The applicant states that the access junction has been suitably designed with appropriate visibility splays provided. An access track will be provided within the site and will allow vehicles to leave the site in a forward gear. The route which construction traffic will take is set out in detail in the CTMP and it confirms that there are no major issues along the proposed route from the Port of Bristol to the proposed site access. it is concluded that the construction phase of the development would therefore be acceptable in the context of highway safety and geometry.

Following clarification over how the access would be altered operated and maintained during the construction process, Transport Development Management Officers raise no objections to the proposal provided the access can be secured via an appropriate highway condition for highway works and a general arrangement plan. There is no issue in regards to the long term operation of the proposed turbine as this would generate few vehicular movements.

The cycle path will require diversion through the application site during the construction phase, with full reinstatement post construction. The route of a public footpath to the north-west of the development would remain unaffected by the proposed development. Transport Development

Management Officer notes this requirement and raises no objection to it on highway safety grounds.

With the above in place, the proposal would not compromise highway safety or conflict with transport policies.

(I) DOES THE PROPOSAL RIASE ANY ARCHAEOLOGICAL ISSUES?

The planning application is accompanied by a Heritage Desk-Based Assessment prepared by Cotswold Archaeology. The assessment identifies that several investigations have previously been undertaken within the study area, comprising nonintrusive desktop studies, archaeological monitoring of groundworks, trial trench evaluation and archaeological excavation. It was established that that no designated archaeological remains are located within the application site. Known and potential non-designated archaeological remains identified with the application site comprised of Prehistoric palaeo-environmental remains, Roman field systems, Medieval/post-medieval ridge and furrow, field boundaries and agricultural building remains.

On reviewing the application the Council's Archaeology Officer concurred with the findings and advised that archaeological conditions to secure the appointment of an archaeological contractor and completion of an archaeological watching brief, should be attached to any consent.

(J) WOULD THE PROPOSAL HAVE AN IMPACT ON TELECOMMUNICATIONS AND AVIATION IN THE VICINITY OF THE SITE?

Wind turbines can block, deflect or disperse electromagnetic transmissions. Developers are required to address any potential impacts, taking account of Civil Aviation Authority, Ministry of Defence and Department of Transport Guidance in relation to radar and aviation. LPAs should satisfy themselves that such issues have been addressed before considering planning applications.

An Aviation Risk Assessment has been prepared as part of the application submission and the analysis undertaken shows that the impact upon aviation of the proposed development is low. A Telecommunications Link Study also formed part of the supporting documents with the planning application. It concluded that the proposed development is not constrained by wireless communication links. The analysis undertaken as part of the study shows that, based on the responses received, mitigation will not be required for the proposed turbine. It is noted that no comments were received from either the Civil Aviation Authority or MOD in regards to the proposal.

As such it is considered that the proposal would be acceptable in this regard and complies with the guidance set out in the NPPG.

(K) DOES THE PROPOSAL ADEQUATELY ADDRESS THE ENVIRONMENTAL ISSUES RELATING TO CONTAMINATED LAND?

The applicant states that the proposed development has been subject of a Phase I Desk Study and a subsequent intrusive Phase II investigation. The ground investigation works did not indicate the presence of any significant concentrations of contaminants. As such, no specific contamination remediation is required.

The Council's Land Contamination Officer noted the above and raised no objection to the proposals subject to a condition for the reporting of any previously unexpected contamination.

CONCLUSION

Significant weight has been given to the Written Ministerial Statement of June 2015. Whilst there are no sites allocated for wind turbine developments within the current Bristol Local Plan, the planning merits of this scheme as well as the fact that there is significant local support, mean that there is no reason to withhold planning consent. The potential adverse impacts of the development are considered to be less than substantial (such as ecological and visual impact) and which can be mitigated through use of planning conditions. The design of the proposal does not fully mitigate the potential safety risks associated with the proposed development given its proximity to Seabank Power Station. However, officers consider that the risks in terms of tower collapse and consequential damage to the assets of the power station would be considerably low and the proposal should not be refused on grounds of safety. The development would introduce renewable energy infrastructure in an area where such installations are deemed appropriate in the Local Plan, which would in turn assist Bristol in achieving an 80% reduction in CO2 emissions by 2050, as required by the Climate Change Act 2008 and the Core Strategy.

Officers therefore recommend that planning permission is granted subject to conditions and refer the application to the Secretary of State.

COMMUNITY INFRASTRUCTURE LEVY
How much Community Infrastructure Levy (CIL) will this development be required to pay?

Development of less than 100 square metres of new build that does not result in the creation of a new dwelling; development of buildings that people do not normally go into, and conversions of buildings in lawful use, are exempt from CIL. This application falls into one of these categories and therefore no CIL is payable.

RECOMMENDED Refer to the Secretary of State

(A) That the application together with responses to the publicity and consultations, the committee report and members comments be referred to the Secretary of State for Communities and Local Government.

If the Secretary of State makes no comment within the 21 day period from receipt of notification, then planning permission is granted subject to the following conditions, plus additional conditions relating to mitigating the ecological impact of the development (to follow):

Condition(s)

Time limit for commencement of development

1. Full Planning Permission

The development hereby permitted shall begin before the expiration of three years from the date of this permission.

Reason: As required by Section 91 of the Town and Country Planning Act 1990, as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

2. Wind turbine - Lifetime of the development

The wind turbine hereby approved shall be completely removed from the site and the site restored to its former state no later than 25 years from the grant of this permission, in

accordance with chapters 4 to 7 of the Technical Report & Construction Traffic Management Plan (Calibro Consultants), dated 13th March 2020, unless otherwise agreed with the Local Planning Authority.

Reason: The turbine has a lifespan of 25 years. Removal at the end of its lifetime or before would safeguard the appearance of the area.

Pre commencement condition(s)

3. Highway works - General arrangement plan

No development shall take place until general arrangement plan(s) to a scale of 1:200 showing the following works to the adopted highway has been submitted to and approved in writing by the Local Planning Authority.

Where applicable indicating proposals for:

- Existing levels of the finished highway tying into building threshold levels
- Alterations to waiting restrictions or other Traffic Regulation Orders to enable the works
- Signing, street furniture, street trees and pits
- Structures on or adjacent to the highway
- Extent of any stopping up, diversion or dedication of new highway (including all public rights of way shown on the definitive map and statement)

No development shall take place over the route of any public right of way prior to the confirmation of a Town & Country Planning Act 1990 path diversion/stopping up order.

Prior to occupation these works shall be completed to the satisfaction of the Highway Authority and approved in writing by the Local Planning Authority.

Reason: In the interests of public safety and to ensure that all road works associated with the proposed development are: planned; approved in good time (including any statutory processes); undertaken to a standard approved by the Local Planning Authority and are completed before occupation.

4. Construction Management Plan - Major Developments

No development shall take place, including any demolition works, until a construction management plan or construction method statement has been submitted to and approved in writing by the Local Planning Authority. The approved plan/statement shall be adhered to throughout the demolition/construction period. The plan/statement shall provide for:

- A construction programme including phasing of works;
- 24 hour emergency contact number;
- Hours of operation;
- Expected number and type of vehicles accessing the site:
- Deliveries, waste, cranes, equipment, plant, works, visitors;
- Size of construction vehicles;
- The use of a consolidation operation or scheme for the delivery of materials and goods;
- Phasing of works;
- Means by which a reduction in the number of movements and parking on nearby streets can be achieved (including measures taken to ensure satisfactory access and movement for existing occupiers of neighbouring properties during construction):

- Programming;
- Waste management;
- Construction methodology;
- Shared deliveries;
- Car sharing;
- Travel planning;
- Local workforce;
- Parking facilities for staff and visitors;
- On-site facilities;
- A scheme to encourage the use of public transport and cycling;
-Routes for construction traffic, avoiding weight and size restrictions to reduce unsuitable traffic on residential roads;
- Locations for loading/unloading, waiting/holding areas and means of communication for delivery vehicles if space is unavailable within or near the site;
- Locations for storage of plant/waste/construction materials;
- Arrangements for the turning of vehicles, to be within the site unless completely unavoidable;
- Arrangements to receive abnormal loads or unusually large vehicles;
- Swept paths showing access for the largest vehicles regularly accessing the site and measures to ensure adequate space is available;
- Any necessary temporary traffic management measures;
- Measures to protect vulnerable road users (cyclists and pedestrians);
- Arrangements for temporary facilities for any bus stops or routes;
- Method of preventing mud being carried onto the highway;
- Methods of communicating the Construction Management Plan to staff, visitors and neighbouring residents and businesses.

Reason: In the interests of safe operation of the adopted highway in the lead into development both during the demolition and construction phase of the development.

5. Construction Environmental Management Plan (CEMP)

The development hereby approved shall not commence until a Construction Environmental Management Plan (CEMP) which will set out measures to be followed by contractors during construction to safeguard interest features on the site and its environs, is submitted to the Local Planning Authority. This must include a Pollution Prevention Plan (PPP) to set out measures to minimise risk of pollution incidents during construction and a Precautionary Working Method Statement (PWMS) to detail the best practice site measures to be implemented during construction to avoid damage to retained habitat within the application site, adjacent habitat and the wider Wildlife Corridor. The PWMS must also detail (but not exclusively):

a. working hours and any requirements to avoid disturbance (works be undertaken during spring/summer (i.e. April to September)),
b. construction lighting if required to ensure no light spill greater than 0.5 Lux on sensitive bat habitat features,
c. arboricultural method statement in accordance with BS5837:2012 and Tree Protection Plan
d. INNS Management Plan
e. Reptile Mitigation Strategy
f. Breeding Bird Protection Plan

Pre-construction surveys for terrestrial and aquatic invasive non-native species (INNS) within the construction areas and within appropriate buffers to works should be undertaken.

These surveys should inform an INNS Management Plan as part of the CEMP. Pre-construction surveys for badger, otter and water vole within the construction areas and within appropriate buffers to works should be undertaken within 3 months prior to the start of construction. These surveys will inform the requirements for any protected species licences from Natural England and appropriate mitigation strategies to be secured through the licencing process and/or through the CEMP.

An Ecological Clerk of Work should be employed to conduct watching briefs during vegetation clearance with regard to potential protected species such as breeding birds, reptiles and amphibians. Where instream (rhine) works require dewatering, rhines should be drained down under the supervision of an ECoW with a background in freshwater ecology and fisheries. The ECoW role should oversee the dewatering process and fish translocation to move fish from impacted rhines to suitable habitat elsewhere. As water levels decrease dewatering should be slowed to allow any fish or amphibians to be removed to suitable receptor location agreed in advance with the local EA fisheries/biodiversity officer. The fish translocation (including European eel and lamprey species ammocoetes) must take place prior to
complete dewatering in order to move fish from impacted rhines to suitable habitat outside the construction footprint. Netting and/or electric fishing techniques should be used requiring a Salmon and Freshwater Fisheries Act (SaFFA) Section 27 exception to "use fishing instruments (other than rod and line) and/or remove fish from inland waters" from the EA.

Clearance of the application site for development should be informed by a Reptile Mitigation Strategy to be included within the CEMP. This should detail the methods of clearance required to ensure legal compliance and minimise the risk of harm to individual reptiles (whilst also taking into account other protected species such as nesting birds), and should include measures such as installation of reptile exclusion fencing and translocation methods to move reptiles to alternative suitable habitat within the surrounding area of land ownership.

Five reptile/amphibian hibernacula should be created to assist in maximising biodiversity value within the land ownership, as shown in Landscape Plan Figure 3.8. A Landscape and Ecology Management Plan and Landscape Plan should be agreed in consultation with the Bristol City Council Nature Conservation Officer, and be governed by a formal management agreement.

Reason: In the interests of nature conservation

6. Bat Monitoring Strategy

No development shall commence unit a Bat Monitoring Strategy to cover the first 5 years of operation of the wind turbine has been submitted. This is to ascertain whether the habitat manipulation has been successful in discouraging bats from utilising the immediate habitat surrounding the turbine and inform recommendations for remedial measures if the mitigation is not performing as expected. The details of the Bat Monitoring Strategy will be agreed in consultation with the Bristol City Council Nature Conservation Officer.

Reason: To help conserve legally protected bats.

7. Ornithological Monitoring Strategy

No development shall commence until a construction phase Ornithological Monitoring Strategy is submitted and agreed in writing to the Local Planning Authority. The operational

phase Ornithological Monitoring Strategy should also be prepared and implemented to cover the 25-year predicted lifetime of the proposed wind turbine. The monitoring strategy should also include surveys to monitor avian collision mortality as well as monitoring of foreshore estuarine birds. Responsibility for implementing the monitoring strategy will be held by the owner/operator of the wind turbine. This strategy should also be agreed with the Bristol City Council Nature Conservation Officer in advance

Reason: To help conserve legally protected birds which include priority species.

8. To ensure implementation of a programme of archaeological works

No development shall take place within the area indicated on plan number SK002 Rev H until the applicant/developer has secured the implementation of a programme of archaeological work, in accordance with a Written Scheme of Investigation which has been submitted by the developer and approved in writing by the Local Planning Authority.

The scheme of investigation shall include an assessment of significance and research questions; and:

1. The programme and methodology of site investigation and recording
2. The programme for post investigation assessment
3. Provision to be made for analysis of the site investigation and recording
4. Provision to be made for publication and dissemination of the analysis and records of the site investigation
5. Provision to be made for archive deposition of the analysis and records of the site investigation
6. Nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation.

Reason: To ensure that archaeological remains and features are recorded prior to their destruction.

Pre occupation condition(s)

9. Land affected by contamination - Reporting of Unexpected Contamination

In the event that contamination is found at any time that had not previously been identified when carrying out the approved development, it must be reported immediately to the Local Planning Authority. An investigation and risk assessment must be undertaken in accordance with the Environment Agency's 'Land Contamination: risk management' guidance and BS 10175:2011 + A2:2017: Investigation of Potentially Contaminated Sites - Code of Practice. Where remediation is necessary a remediation scheme must be prepared which ensures the site will not qualify as contaminated land under Part 2A of the Environmental Protection Act 1990 in relation to the intended use of the land after remediation.

Following completion of measures identified in the approved remediation scheme a verification report must be prepared, which is subject to the approval in writing of the Local Planning Authority. The Local Planning Authority must be given two weeks written notification of commencement of the remediation scheme works.

Reason: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without

unacceptable risks to workers, neighbours and other offsite receptors. This is in line with paragraph 170 of the National Planning Policy Framework.

10. To secure the conduct of a watching brief during development groundworks

The applicant/developer shall ensure that all groundworks, including geotechnical works, are monitored and recorded by an archaeologist or an archaeological organisation to be approved by the council and in accordance with the Written Scheme of Investigation approved under condition 8.

Reason: To record remains of archaeological interest before destruction.

11. Flood resilience

The development shall be carried out in accordance with the submitted flood risk assessment by Calibro dated 18 February 2020 (ref BR-640-0001 revision 2) and the following mitigation measures it details.

- All resilience measures detailed within section 6.2 of the FRA to a level of 9.60mAOD.

These mitigation measures shall be fully implemented prior to first operation. The measures shall be retained and maintained thereafter throughout the lifetime of the development.

Reason: To reduce the risk of flooding to the proposed development and future users.

12. C26 Flood Evacuation Plan - Commercial Property

No building or use herby permitted shall be occupied or the use commenced until the applicant has submitted to and had approved in writing by the Local Planning Authority a Flood Warning and Evacuation Plan (FEP). This Plan shall include the following information:

* command & control (decision making process and communications to ensure activation of FEP);
* training and exercising of personnel on site (H& S records of to whom and when);
* flood warning procedures (in terms of receipt and transmission of information and to whom);
* site evacuation procedures and routes; and
* provision for identified safe refuges (who goes there and resources to sustain them).

The FEP shall be reviewed at intervals not exceeding 3 years, and will form part of the Health & Safety at Work Register maintained by the applicant.

Reason: To limit the risk of flooding by ensuring the provision of a satisfactory means of flood management on the site

13. To avoid direct impacts on nesting birds, site clearance work should be undertaken outside of the nesting bird season (i.e. nesting bird season is between March & August inclusive). This vegetation removal period therefore overlaps with the core wintering bird months, so works during this period have the potential to lead to disturbance impacts on estuarine birds. To mitigate this, vegetation clearance during the period September - February should

be undertaken in a sensitive manner using hand operated tools (i.e. chainsaws and brushcutters).

Reason: To ensure that wild birds, building or using their nests are protected.

14. The occurrence of breeding Cetti's warbler should be monitored during the months of April - July (where these months coincide with the construction period) to identify any active territories. These should be surrounded by a suitably sized buffer zone determined by an ornithologist within which no construction work would take place, to ensure no disturbance impacts on this Schedule 1 species.

Reason: In the interests of nature conservation.

15. The potential effect of disturbance to wintering waterbirds during construction and decommissioning could be avoided by timing of construction and decommissioning works to avoid the winter months. Avoidance of the months November to February should occur, with construction works being permitted during the early and late wintering waterbird season (September/October & March), subject to an ornithological watching brief to monitor of arrival/dispersal of wintering waterbirds within the 800 m disturbance zone. Works over summer months are acceptable, other than vegetation clearance (under condition 13).

Reason: To help conserve legally protected birds which include priority species

16. Monitoring during construction between November and February should take place on a weekly basis and cover the high tide period. Should >1% of the EMS population of any species (or assemblage of species) be recorded within the 800 m zone, birds should be monitored for any signs of disturbance by an ornithologist. Should birds be showing signs of disturbance (e.g. regularly taking flight, moving to other locations), development works should cease and only recommence on the advice of the ornithologist.

Reason: To help conserve legally protected birds which include priority species

17. Landscape (Soft and Hard)

The site shall be landscaped strictly in accordance with the approved Landscape Plan (Figure 3.8 Landscape Masterplan dated 13 Mar 2020) in the first planting season after completion or first occupation of the development, whichever is the sooner. Details shall include:

a. a scaled plan showing vegetation to be retained and trees and plants to be planted:
b. proposed hardstanding and boundary treatment:
c. a schedule detailing sizes and numbers of all proposed trees/plants
d. Maintenance schedule to ensure successful establishment and survival of new planting, including watering quantities and schedule.

There shall be no excavation or raising or lowering of levels within the prescribed root protection area of retained trees unless agreed in writing by the Local Planning Authority. Any tree(s) that die(s), are/is removed, become(s) severely damaged or diseased shall be replaced and any new planting (other than trees) which dies, is removed, becomes severely damaged or diseased within five years of completion shall be replaced. Replacement planting shall be in accordance with the approved details (unless the Local Planning Authority gives its written consent to any variation).

Reason: Required to safeguard and enhance the character and amenity of the area, to provide ecological, environmental and bio-diversity benefits and to maximise the quality and usability of open spaces within the development, and to enhance its setting within the immediate locality in accordance with DM15 and DM17.

Post occupation management

18. Noise levels

The level of any noise generated by reason of this development shall not exceed to an LA90, 10 min of 35dB up to wind speeds of 10 m/s at 10m height at any residential premises.

Reason: To safeguard the amenity of nearby premises and the area generally.

List of approved plans

19. List of approved plans and drawings

The development shall conform in all aspects with the plans and details shown in the application as listed below, unless variations are agreed by the Local Planning Authority in order to discharge other conditions attached to this decision.

SK001 REV E Site location plan, received 17 March 2020
SK002 REV H Proposed site plan, received 17 March 2020
EP3.00.156-1 Turbine elevation and plan views general arrangement, received 17 March 2020
SK003 Metering substation elevations and plans, received 17 March 2020
Flood risk assessment, received 17 March 2020
Traffic management plan, received 17 March 2020
3.8 Landscape masterplan, received 17 March 2020

Reason: For the avoidance of doubt.

Advices

1. BS Standard - tree work: Any works should be completed in accordance with British Standard 3998: Recommendations for tree work, you are advised that the work should be undertaken by a competent and suitably qualified tree contractor.

2. Tree Protection: You are advised to refer to BS5837 : 2012 Trees in relation to construction for detailed information on types of tree protection, protection zones and other relevant matters.

3. Nesting birds: Anyone who takes, damages or destroys the nest of any wild bird whilst that nest is in use or being built is guilty of an offence under the Wildlife and Countryside Act 1981 and prior to commencing work you should ensure that no nesting birds will be affected.

4. Bats and bat roosts: Anyone who kills, injures or disturbs bats, obstructs access to bat roosts or damages or disturbs bat roosts, even when unoccupied by bats, is guilty of an offence under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation (Natural Habitats, &c.) Regulations Act. Prior to

commencing work you should ensure that no bats or bat roosts would be affected. If it is suspected that a bat or bat roost is likely to be affected by the proposed works, you should consult English Nature (Taunton office 01823 283211).

5. Tree works

The following British Standards should be referred to:

a. BS: 3882:2015 Specification for topsoil
b. BS: 3936-1:1992 Nursery Stock - Part 1: Specification for trees and shrubs
c. BS: 3998:2010 Tree work - Recommendations
d. BS: 4428:1989 Code of practice for general landscaping operations (excluding hard surfaces)
e. BS: 4043:1989 Recommendations for Transplanting root-balled trees
f. BS: 5837 (2012) Trees in relation to demolition, design and construction - Recommendations
g. BS: 7370-4:1993 Grounds maintenance part 4. Recommendations for maintenance of soft landscape (other than amenity turf).
h. BS: 8545:2014 Trees: from nursery to independence in the landscape - Recommendations
i. BS: 8601:2013 Specification for subsoil and requirements for use

6. Security

You are advised to refer to the comments of the Avon and Somerset Crime Reduction Unit (CRU) and consider the installation of temporary surveillance cameras are used to mitigate the opportunity for theft at this stage, in what is, a relatively isolated location.

7. Network Rail

The applicant will need to engage with Network Rail Asset Protection, AssetProtectionWestern@networkrail.co.uk, to determine if a Basic Asset Protection Agreement is required to manage the potential interfaces these works have on Network Rail assets and operations. This will be determined by the methodology employed, essentially the crane position. Contact will be required a minimum of 3months prior to works planned to commence.

8. Construction & Decommissioning

Due to the potential for disturbance arising from contractors' operations, the developers' attention is drawn to Section 60 and 61 of the Control of Pollution Act 1974, to BS 5528: Parts 1 and 2: 2009 Code of practice for noise and vibration control on construction and open sites and the code of practice adopted by Bristol City Council with regard to "Construction Noise Control". The hours that are usually allowed for construction or demolition works that are audible at any residential property to be carried out are 8.00 to 18.00 Monday to Friday and 8.00 to 13.00 Saturdays. Further information can be obtained from Pollution Control, Bristol City Council pollution@bristol.gov.uk

9. You are advised that the planting season is normally November to February.

10. A felling licence may be required for the felling of over 5 cubic metres of wood. Exemptions from the requirement to obtain a felling licence are set out in Section 9 of the Forestry Act

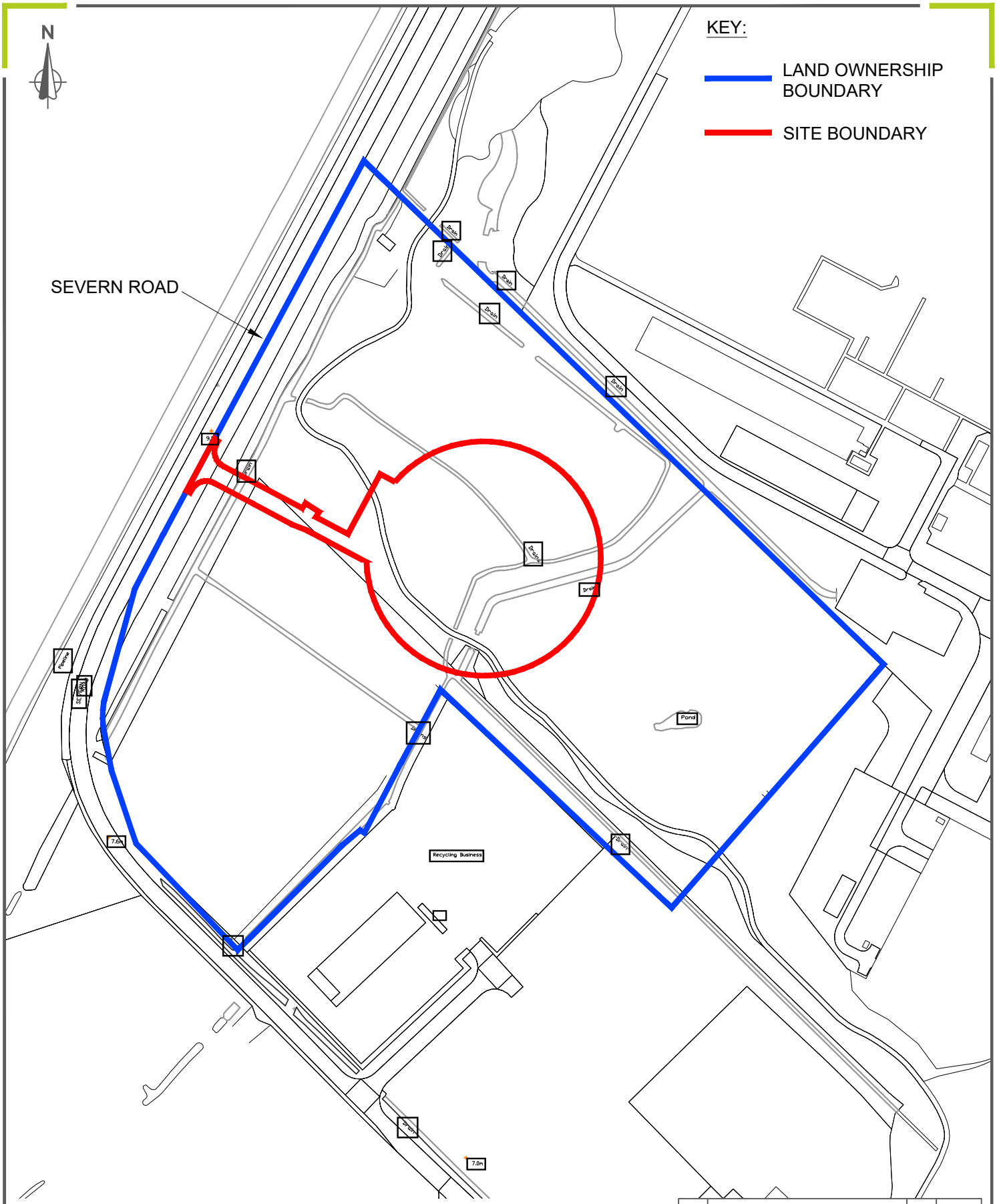
1967. For more information please go to www.gov.uk/guidance/apply-online-for-a-felling-licence.

commdelgranted
V1.0211

Supporting Documents

2. Land on the South East Side of Severn Road Avonmouth.

1. Site location plan
2. View of site from Severn Road
3. Proposed site plan
4. Turbine plan and elevations
5. Visual representations – before and after



REV:	DESCRIPTION:	BY:	DATE:
E	REDLINE BOUNDARY REVISED	NT	18/02/20

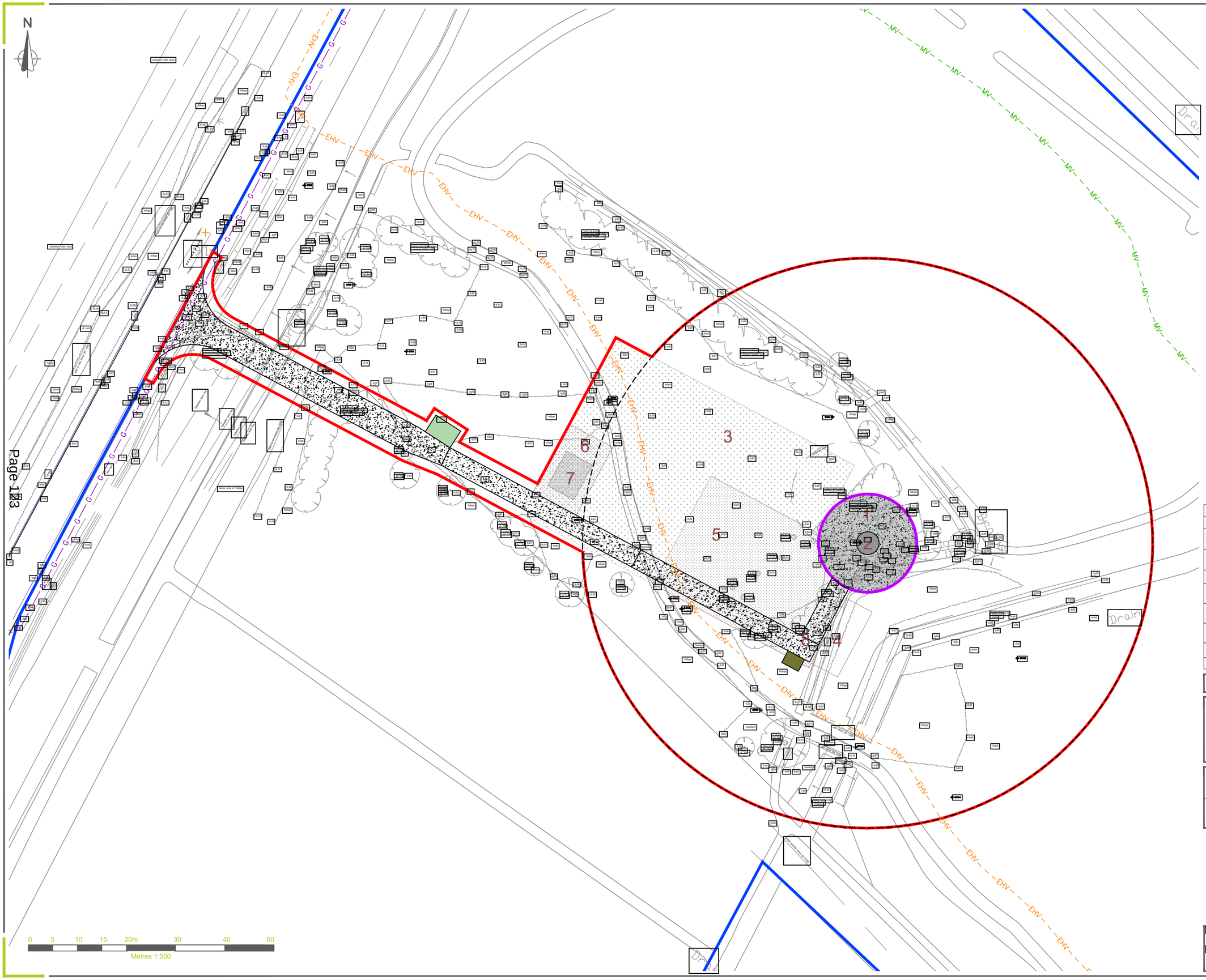
AMENDMENTS:

SITE:
SEABANK, AVONMOUTH, BRISTOL

TITLE:
SITE LOCATION PLAN

SCALE AT A4:	DRAWN:	CHECKED:	REVISION:
1:2500 @ A4	NT	KT	E
PROJECT NO: BR-640-0001		DRAWING NO: SK001	DATE: 09/12/19

calibro
transport, flood risk & infrastructure consultants
t: 0117 2441 970 www.calibro-consultants.com
Whitefriars Business Centre, 2nd Floor, Whitefriars, Lewins Mead, Bristol, BS1 2NT



REV:	DESCRIPTION:	BY:	DATE:
H	RED LINE BOUNDARY AMENDED.	NT	18/02/20
G	RED LINE BOUNDARY AMENDED.	NT	14/02/20
F	UNDERGROUND GAS AND ELECTRIC CABLES INCLUDED.	NT	14/02/20
E	AREAS 6 & 7 REVISED. KEY UPDATED	NT	12/02/20
D	LAYDOWN AREAS INCLUDED	NT	05/02/20
C	LAND OWNERSHIP AND REDLINE BOUNDARY REVISED.	NT	14/01/20
B	LAND OWNERSHIP BOUNDARY REVISED.	NT	16/12/19
A	RED LINE REVISED. TEMPORARY WORKS AREAS REMOVED	NT	12/12/19
-	FIRST ISSUE	NT	09/12/19

STATUS: PRELIMINARY

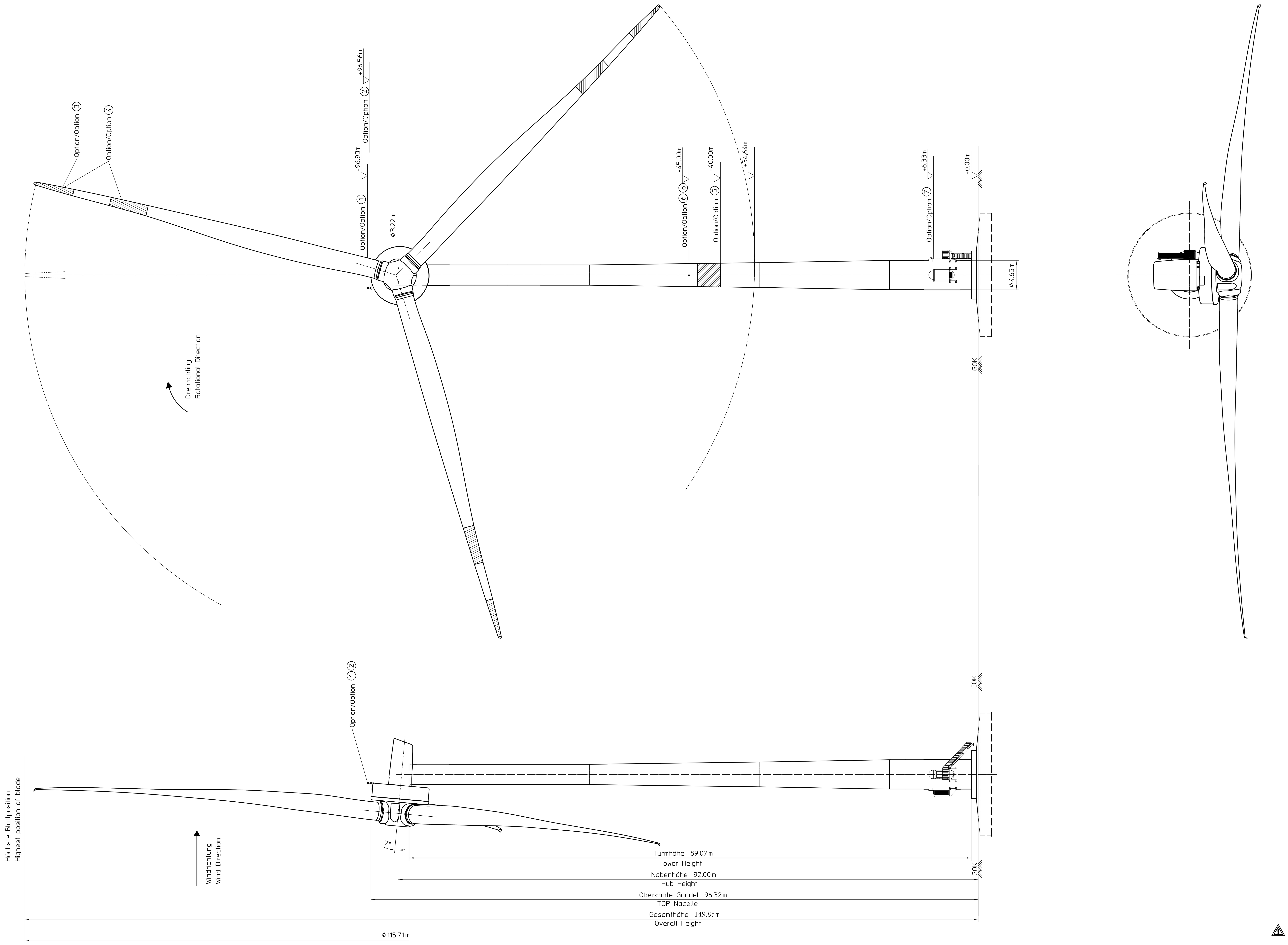
CLIENT: AMBITON LAWRENCE WESTON

SITE: SEABANK, AVONMOUTH BRISTOL

TITLE: PROPOSED SITE PLAN

calibro
transport, flood risk & infrastructure consultants
t: 0117 2441 970 www.calibro-consultants.com
Whitefriars Business Centre, 2nd Floor, Whitefriars, Lewins Mead, Bristol, BS1 2NT

SCALE AT A2:	DATE:	DRAWN:	CHECKED:
1:500 @ A2	09/12/19	NT	KT
PROJECT NO.:		DRAWING NO.:	REVISION:
BR-640-0001		SK002	H



Projektbezogene Angaben / *Project-specific data*	
Projekt / *Project:*	
Geländehöhe über NHN / *Ground elevation above sea level:*	
Gesamthöhe über NHN / *Total elevation above sea level:*	
Optionen / *Options:*	
FOK: Fundamentoberkante / *Top foundation* GOK: Geländeoberkante / *Top ground*	
① Nachtkennzeichnung / *Nighttime marking:* W - Rot / *W - Red*	
② Tageskennzeichnung / *Daytime marking:* weißes Blitzlicht mit Sichtweitenreduzierung *white strobe lights with visibility reduction*	
③ Tageskennzeichnung / *Daytime marking:* 6m rot (RAL 3020) / graues Rotorblatt (RAL 7038) / *6m red (RAL 3020)* *grey rotor blade (RAL 7038)*	
④ Tageskennzeichnung / *Daytime marking:* rot/grau/rot (RAL 3020 / RAL 7038 / RAL 3020) je 6m lang / *red/grey/red (RAL 3020 / RAL 7038 / RAL 3020) each 6m long*	
⑤ Tageskennzeichnung / *Daytime marking:* 3,64m Farbfeld RAL 3020 / *3,64m colour field RAL 3020*	
⑥ Nachtkennzeichnung / *Nighttime marking:* Hindernisfeuer auf jeder Turmachse / *Obstruction beacon on every tower axis*	
⑦ Schattenabschaltung standard: *Shadow shutdown standard:* 3 Sensoren im Winkel von 120° / *3 sensors at an angle of 120°*	
⑧ Schattenabschaltung Waldstandort: *Shadow shutdown at forest sites:* 3 Sensoren im Winkel von 120° / *3 sensors at an angle of 120°*	

Dieses Dokument wurde auf Anfrage bzw. für einen bestimmten Auftrag verschickt.
Der Empfänger wurde nicht registriert !
⟹ Der Empfänger wird bei Änderung des Dokuments nicht automatisch informiert !

This document has been sent on request / for a certain order.
The receiver has not been registered !
⟹ The receiver will not automatically be informed in the case of alterations !

ENERCON GmbH
Dreekamp 5
26605 Aurich
Germany

Allgemeintoleranzen / General tolerances	Oberfläche / Surface: DIN EN ISO 1302	Maßstab / Scale: 1:200 — Gewicht / Weight: KG
	Dat.	Name
Erstellt / Creat. by	22.11.2018	Berta
Freigegeben / Approved	05.12.2018	A.Albers
Standard		
Release language		

Ansichtszeichnung Stahlturm
Elevation drawing steel tower
E-115 EP3 E3-ST-92-FB-C-01

Rev.	Änderung / Change	Freig. Dat.	Name
1	Überarbeitet	16.05.19	SJA ASA

WRD Turm

EP3.00.156 - 1

Sprache / Language	Blatt/Bl. / Sheet/qty
DE	1/1

No guarantee can be given in respect of this translation.

ID Nr.: KM1377163 — DIN A0

Technische Änderungen vorbehalten
Subject to technical change without prior notice

THE Landmark PRACTICE

PROPOSED WIND TURBINE, LAND ON THE SOUTH EAST SIDE OF SEVERN ROAD (A403), AVONMOUTH

ACCURATE VISUAL REPRESENTATIONS

ON BEHALF OF AMBITION COMMUNITY ENERGY C.I.C

MAY 2020

LANDMARK REF: 3022

Project: Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth

Prepared by: The Landmark Practice
Hope Chapel House
Hope Chapel Hill
Hotwells, Bristol
BS8 4ND

Tel: 0117 923 0455

Landmark Ref: 3022

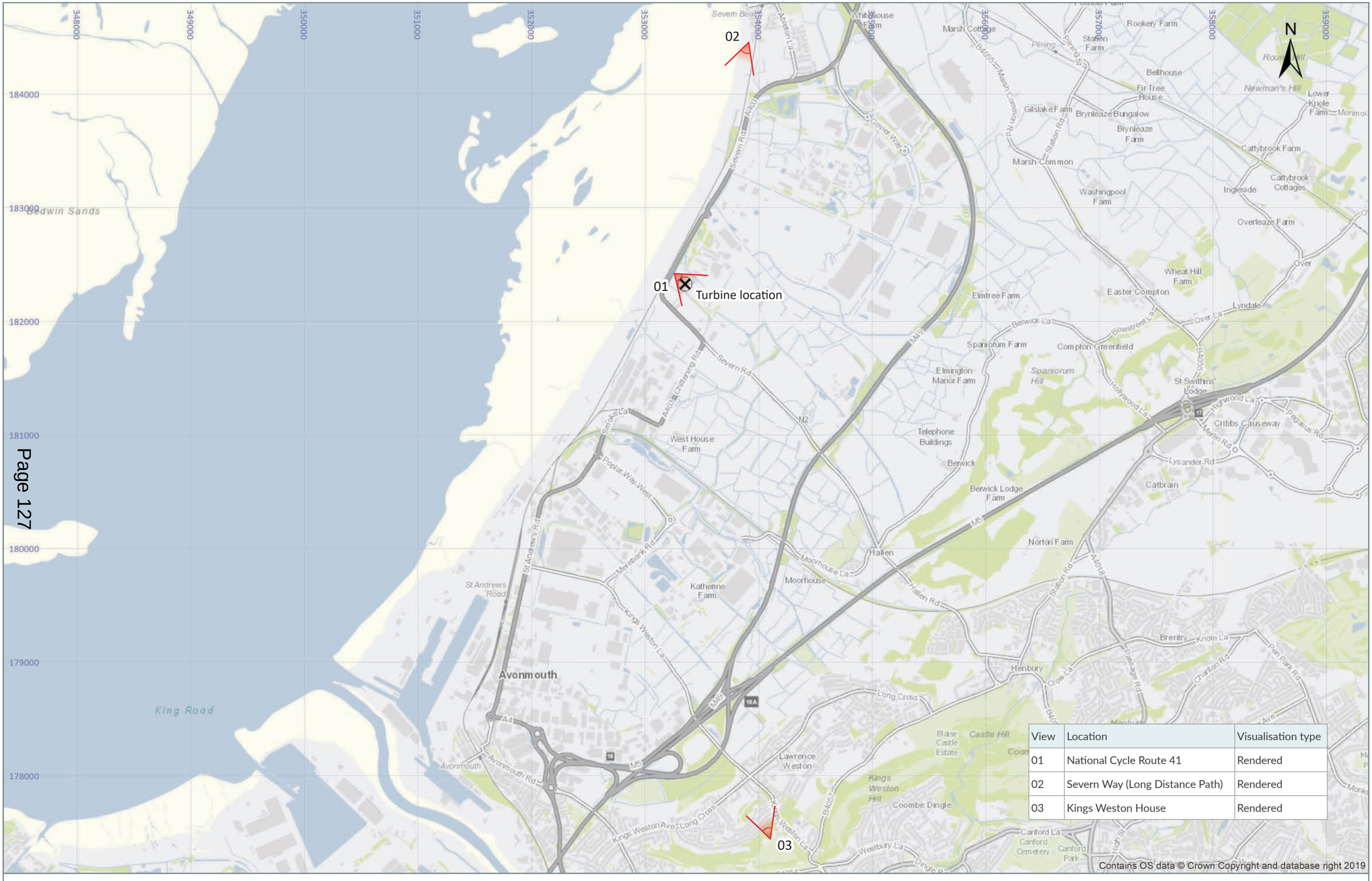
Client: Ambition Community Energy C.I.C

The information which we have prepared and provided is true, in accordance with Landscape Institute Technical Guidance Notes 06/19 Visual Representation of Development Proposals and were current at the time of the original set of views (May 2020).

The following AVRs are based on proposed site plan (drwg BR-640-0001), turbine elevations (drwg EP3.00.156-1) and landscape masterplan (drwg 3022_L_SW_P)

Version	Prepared by	Checked by	Approved by	Issued on
D1	GS	LF	GM	14/05/20
V1	GS	LF	GM	15/05/20

*D denotes a Draft version



View	Location	Visualisation type
01	National Cycle Route 41	Rendered
02	Severn Way (Long Distance Path)	Rendered
03	Kings Weston House	Rendered

THE Landmark PRACTICE

Environmental Planning • EIA • Landscape Architecture • Ecology • Architectural Graphics

0 0.5 1 km

Revision:	-	Sheet Size:	A3
Drawn:	GS	Checked:	LF
Date:	15/05/20	Authorised:	GM

Project:	Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth
Client:	Ambition Community Energy C.I.C
Drawing title:	Viewpoint Location Plan

Fig: 1

S:\PROJECTS\3000 - 3049\3022 - ALW Community Wind, Seabank\GRAPHICS (WORKING)\InDesign\3022_Seabank_AVRs.indd

40° 30° 20° 10° 10° 20° 30° 40°

20 cm

10 cm

0

THE Landmark PRACTICE

Environmental Planning • EIA • Landscape Architecture • Ecology • Architectural Graphics

Distance to turbine:	102 m
Bearing to:	118.8° from north
Viewpoint grid reference:	E: 353269.5 N: 182388.7
Viewpoint ground height:	6.8m AOD
Date & time of photo:	06/05/2020 12:41
Camera:	Nikon D750
Lens, FL, max aperture:	18-55mm, 35mm Pano (Portrait), F11

Revision:	-	Sheet Size:	A3
Drawn:	GS	Checked:	LF
Date:	15/05/20	Authorised:	GM
Recommended viewing distance:		200 mm	
Weather:		Clear, sunny	
Visibility:		Good	

Project:	Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth
Client:	Ambition Community Energy C.I.C
Drawing title:	Viewpoint 01 - National Cycle Route 41 Existing view

Fig: 2.1

THE Landmark PRACTICE

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Distance to turbine:	102 m
Bearing to:	118.8° from north
Viewpoint grid reference:	E: 353269.5 N: 182388.7
Viewpoint ground height:	6.8m AOD
Date & time of photo:	06/05/2020 12:41
Camera:	Nikon D750
Lens, FL, max aperture:	18-55mm, 35mm Pano (Portrait), F11

Revision:	-	Sheet Size:	A3
Drawn:	GS	Checked:	LF
Date:	15/05/20	Authorised:	GM
Recommended viewing distance:		200 mm	
Weather:		Clear, sunny	
Visibility:		Good	

Project:	Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth
Client:	Ambition Community Energy C.I.C
Drawing title:	Viewpoint 01 - National Cycle Route 41 Rendered (15 years after completion)

Fig: 2.2

S:\PROJECTS\3000 - 3049\3022 - ALW Community Wind, Seabank\GRAPHICS (WORKING)\InDesign\3022_Seabank_AVRs.indd

15° 10° 5° 5° 10° 15°

Page 180

20 cm
10 cm
0

THE Landmark PRACTICE

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Distance to turbine:	2.1 km
Bearing to:	192.9° from north
Viewpoint grid reference:	E: 353914.1 N: 184434.1
Viewpoint ground height:	9.5m AOD
Date & time of photo:	06/05/2020 13:00
Camera:	Nikon D750
Lens, FL, max aperture:	50mm fixed lens, F11

Revision:	-	Sheet Size:	A3
Drawn:	GS	Checked:	LF
Date:	15/05/20	Authorised:	GM
Recommended viewing distance:		450 mm	
Weather:		Clear, sunny	
Visibility:		Good	

Project:	Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth
Client:	Ambition Community Energy C.I.C
Drawing title:	Viewpoint 02 - Severn Way Existing view

Fig: 2.3

15° 10° 5° 5° 10° 15°

20 cm
10 cm
0

THE Landmark PRACTICE

Environmental Planning • EIA • Landscape Architecture • Ecology • Architectural Graphics

Distance to turbine:	2.1 km
Bearing to:	192.9° from north
Viewpoint grid reference:	E: 353914.1 N: 184434.1
Viewpoint ground height:	9.5m AOD
Date & time of photo:	06/05/2020 13:00
Camera:	Nikon D750
Lens, FL, max aperture:	50mm fixed lens, F11

Revision:	-	Sheet Size:	A3
Drawn:	GS	Checked:	LF
Date:	15/05/20	Authorised:	GM
Recommended viewing distance:		450 mm	
Weather:		Clear, sunny	
Visibility:		Good	

Project:	Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth
Client:	Ambition Community Energy C.I.C
Drawing title:	Viewpoint 02 - Severn Way Rendered

Fig: 2.4

S:\PROJECTS\3000 - 3049\3022 - ALW Community Wind, Seabank\GRAPHICS (WORKING)\InDesign\3022_Seabank_ AVRs.indd

15° 10° 5° 5° 10° 15°

20 cm

10 cm

0

THE Landmark PRACTICE

Environmental Planning • EIA • Landscape Architecture • Ecology • Architectural Graphics

Distance to turbine:	4.9 km
Bearing to:	350.2° from north
Viewpoint grid reference:	E: 354109.7 N: 177431.1
Viewpoint ground height:	60.7m AOD
Date & time of photo:	06/05/2020 13:39
Camera:	Nikon D750
Lens, FL, max aperture:	50mm fixed lens, F11

Revision:	-	Sheet Size:	A3
Drawn:	GS	Checked:	LF
Date:	15/05/20	Authorised:	GM
Recommended viewing distance:		450 mm	
Weather:		Clear, sunny	
Visibility:		Good	

Project:	Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth
Client:	Ambition Community Energy C.I.C
Drawing title:	Viewpoint 03 - Kings Weston House Existing view

Fig: 2.5

S:\PROJECTS\3000 - 3049\3022 - ALW Community Wind, Seabank\GRAPHICS (WORKING)\InDesign\3022_Seabank_ AVRs.indd

15° 10° 5° 5° 10° 15°

20 cm

10 cm

0

THE Landmark PRACTICE

Environmental Planning • EIA • Landscape Architecture • Ecology • Architectural Graphics

Distance to turbine:	4.9 km
Bearing to:	350.2° from north
Viewpoint grid reference:	E: 354109.7 N: 177431.1
Viewpoint ground height:	60.7m AOD
Date & time of photo:	06/05/2020 13:39
Camera:	Nikon D750
Lens, FL, max aperture:	50mm fixed lens, F11

Revision:	-	Sheet Size:	A3
Drawn:	GS	Checked:	LF
Date:	15/05/20	Authorised:	GM
Recommended viewing distance:		450 mm	
Weather:		Clear, sunny	
Visibility:		Good	

Project:	Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth
Client:	Ambition Community Energy C.I.C
Drawing title:	Viewpoint 03 - Kings Weston House Rendered

Fig: 2.6

PROPOSED WIND TURBINE LAND ON THE SOUTH EAST SIDE OF SEVERN ROAD (A403), AVONMOUTH

APPENDIX A

15/05/20

LANDMARK REF: 3022

Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth

Technical Methodology

15/05/20

1.0	For all photography	Responses
1.1	Make and model of camera, and its sensor format (assumed 35mm FFS)	Nikon D750, Full Frame Sensor (35.9 x 24.0 mm)
1.2	If panoramas used: make and type of panoramic head and equipment used to level head	Tubular and bulls-eye spirit level mounted on tripod
1.3	Method to establish the camera location (eg handheld GPS/GNSS, GPS/RTK GPS, survey point, visual reference)	Topo survey and visual reference on high quality aerial photograph
1.4	Likely level of accuracy of location (#m, #cm etc)	≤ 1m
1.5	If working outside the UK, geographic co-ordinate system (GCS) used (e.g. WGS-84)	Inside the UK (British National Grid OSGB_1936)
2.0	For the 3D Model	
2.1	3D Modelling and Rendering Software	SketchUp Pro 2018, Autodesk 3Ds Max 2017, Photoshop CC 2020
2.2	Source of topographic height data and its resolution	Topographical survey and LiDAR Digital Surface Modelling (DSM) 1m resolution
2.3	How have the model and the camera locations been placed in the soft-ware?	Point coordinates added to geo-referenced dwg file containing topo survey and proposed layout. Points loaded into 3D program and camera added to points.
3.0	Generally	
3.1	Any limitations in the overall methodology for preparation of the photomontage and visualisations?	Faster CPU and improved graphics card will speed up AVR process

Technical methodology template extracted and adopted from Landscape Institute's Photography and Photomontage public consultation draft, June 2018

4.0	Photographic equipment	Responses
4.2	Date and Time of captured photography	06/05/2020, times vary (see AVR pack figure 2)
4.3	A photograph of the tripod location, to allow the viewer to understand where the camera/tripod was located.	Yes- See Appendix B tripod photograph location
4.4	Make, maximum aperture and focal length of the camera lens(es) used.	Nikon D750, F11, 18-55mm lens and 50 mm fixed lens,
4.5	If lenses other than 50mm have been used, explain why a different lens is appropriate (e.g. wide-angle view required to capture the width or height of the development)	35mm focal used on View 01 to capture context within view due to close proximity and scale of proposal. 35mm used in accordance with current LI guidlines see 'TGN 06/19 Visusal Representation of development proposals'
4.6	Camera location grid coordinates: eastings & northings to 1m accuracy; height of ground in mAOD	See AVR pack figures 1 & 2 for each viewpoint
4.7	Height of the camera lens above ground level. If above 1.65m or below 1.5m, why?	1.5m-1.65m (average eye level)
4.8	Distance (in m) to the nearest boundary or key feature(s) of site, as most appropriate.	See AVR pack figures 1 & 2 for each viewpoint
5.0	3D Model	
5.1	What elements in the view have been used as target points to check the horizontal alignment?	Multiple existing features in photograph/view matched to topo plan, used a reference points/markers, camera automatically set to level horizontally
5.2	What elements in the view have been used to check the vertical alignment of the model in the view?	Multiple existing features in photograph/view are matched to topo plan, used a reference points/markers, camera automatically set to level vertical alignment

PROPOSED WIND TURBINE LAND ON THE SOUTH EAST SIDE OF SEVERN ROAD (A403), AVONMOUTH

APPENDIX B

15/05/20

LANDMARK REF: 3022

Proposed Wind Turbine, Land on the East Side of Severn Road (A403), Avonmouth

Accurate Visual Representations - Camera Tripod Location

15/05/20

Viewpoint 01 tripod location

Viewpoint 02 tripod location

Viewpoint 03 tripod location

Development Control Committee A – 8 July 2020 **ITEM NO. 3**

WARD: Lawrence Hill

SITE ADDRESS: Unit 5 & 6 Marketside Industrial Site Albert Road Bristol BS2 0WA

APPLICATION NO: 20/01254/A Advertisement

DETERMINATION DEADLINE: 12 June 2020

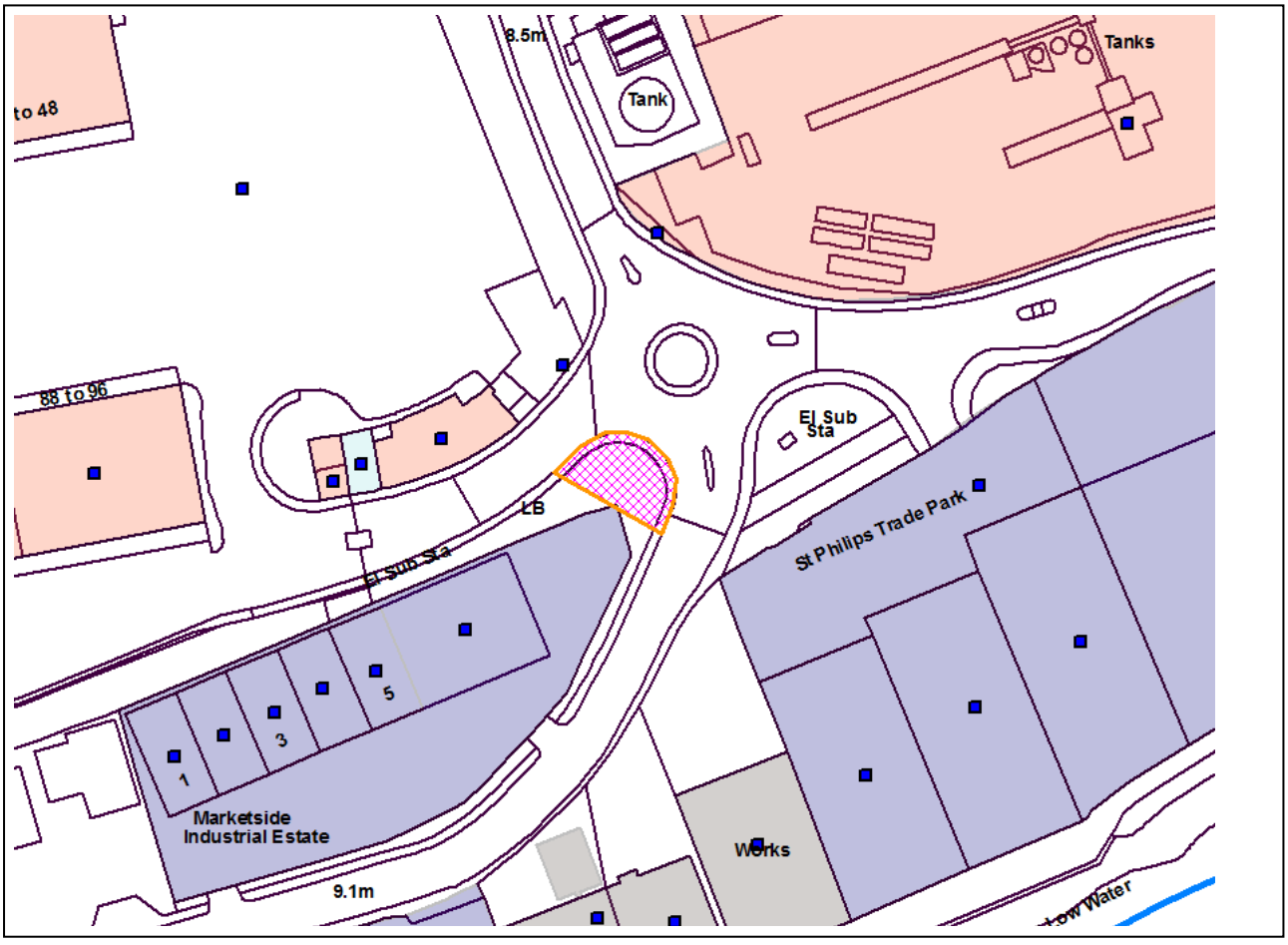
Upgrade of 1no. poster panel to digital LED display advertisement (single-sided).

RECOMMENDATION: Grant subject to Condition(s)

APPLICANT: Global
Global
7th Floor
84 Theobald's Road
London
WC1X 8NL

The following plan is for illustrative purposes only, and cannot be guaranteed to be up to date.

LOCATION PLAN:



UPDATE FOLLOWING DEVELOPMENT CONTROL COMMITTEE A – 10 June 2020

BACKGROUND

Members will recall that on 10 June 2020 officers had recommended approval for this application. The applicant proposes the installation of an LED sign to replace the existing sign on the Albert Road roundabout in St Philip's Marsh. Committee resolved to defer the decision due to highways safety concerns, requesting an update report from officers on three points:

1. Information on the degree to which there has been an increase in accidents in locations where LED signs have been installed.
2. Exploration of the idea of adding a condition which limited the advert changing (every ten seconds) to daytime only. The purpose would be to restrict any changing images at night for highways safety reasons.
3. Information about the expected changes in cycle and foot traffic in the area due to both regeneration and changing patterns of transport arising from the Covid-19 pandemic.

Whilst not a point to which the deferral reasons related, members are advised that the current advertisement has deemed consent by virtue of the fact that has been in place for over ten years.

The Town and Country Planning (Control of Advertisements) (England) Regulations 2007, Schedule 3, Part 1, Class 13 states that consent is deemed if "An advertisement displayed on a site that has been used continually for the preceding ten years for the display of advertisements without express consent." The existing advert complies with the conditions relating to this class and has been in place for over ten years. It therefore has deemed advertisement consent.

EQUALITIES STATEMENT

During the determination of this application due regard has been given to the impact of this scheme in relation to the Equalities Act 2010 in terms of its impact upon key equalities protected characteristics. These characteristics are age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. There is no indication or evidence (including from consultation with relevant groups) that different groups have or would have different needs, experiences, issues and priorities in relation this particular proposed development. Overall, it is considered that the approval of this application would not have any significant adverse impact upon different groups or implications for the Equalities Act 2010.

KEY ISSUES

1. Has there been an increase in accidents in locations where LED signs have been installed?

Officers have looked into this issue for the Bristol and also more widely.

i) Bristol

Of the LED adverts given permission either by the Local Planning Authority or by the Planning Inspectorate, the following have now been installed:

a) Lawrence Hill Roundabout
b) M32 (Eastville)
c) St Philips Causeway

For each sign, officers have looked at the accident record and can advise as follows:

a) Lawrence Hill roundabout (Installed in the first half of 2017)

Before sign installed:

- 16.05.2016: Motorist, slight. Cause: Changing lane conflict between two vehicles.

After sign installed:

- 20.03.2018: Cyclist, slight. Cause: Collision with vehicle travelling in bus lane, as cyclist attempts to filter into bus lane.
- 07.12.2018: Motorist, slight. Cause: Nose-tail shunt during peak period, vehicle exiting roundabout failing to stop behind queuing traffic.

b) M32 (Eastville) (facing northeast) (installed in early 2019)

Before sign installed:

- 2015: nose-to-tail (shunt) with 3 casualties (slight injury).
- 2016: loss of control with two casualties (slight injury)
- 2017: nose-to-tail shunt with 1 casualty (slight injury)
- 25.06.2018: Slight injury (motorcyclist). Cause: Slow moving / static traffic, vehicle changes lane doesn't see motorcyclist travelling behind between queuing / stationary vehicles.

After sign installed:

- No accidents recorded.

c) St Philips Causeway (installed at some point between end of 2013 and April 2017)

- No recorded personal injury accidents 2014-2019 on St. Philips Causeway (SPC) between Albert Road roundabout and where SPC crosses the Feeder Canal.

Commentary on the above accident data

What does the above data tell us and what are its limitations?

- There is no evidence within the accident record to confirm (or otherwise) whether the installation of a LED sign was a causal factor in any of the accidents mentioned above. There was no reference in any of the accident reports to state that drivers were distracted by an advertisement.

- Collision stats comprise only the recorded personal injury collisions where the emergency services have attended the scene and recorded the incident.

- As a result of the above, 'near-misses' and collisions where the emergency services weren't present or injuries sustained are not recorded.

- Where collisions occur close to LED sites, it is very important to stress that this data neither indicates nor rules out that the digital advert was the cause of the incident. The statistics for the Laurence Hill roundabout sign show two accidents after the sign was installed. However, numerous other actions could have caused the driver to not pay attention (for example, changing the radio / mobile phone / passenger distraction / other distractions outside the car).

The Local Planning Authority and Planning Inspectors have only approved digital adverts incorporating LED signage where these are considered safe (i.e. avoiding junctions where there are numerous existing conflicts). As a result, there are very few active LED sites at present. In addition to the three sites mentioned above, there are a number of sites where LED signs have been given permission either by the LPA or by the Planning Inspectorate, however, to officers' knowledge, the signs have not yet been installed. These include the following:

- 19/04821/A 164-188 Bath Road (approved 31 March 2020 – east-facing only).
- 18/05167/A Avon Meads Roundabout (approved on appeal 27 June 2019 – Sign A only).
- 18/01892/A Bond Street South (approved on appeal 21 December 2018).
- 17/02764/A 6 Claremont Street (approved on appeal 15 March 2018).
- 17/01761/A Whitefriars/ Lewins Mead (approved on appeal 27 October 2017).
- 16/05540/A 20 Easton Road (approved 5 December 2016).

It is also important to be aware that in the case of sites where there is an existing non-LED advertisement, there are some instances where records show that accidents have occurred, and some instances where records show that accidents have not occurred.

ii) Nationwide/ international

Officers have looked into the feasibility of compiling records similar to the above on a nationwide level. Such an exercise would be very time-consuming and would be reliant on the assistance of other people, often beyond the LPA's control, as we would have to approach other LPAs for their data on approved LED signs and accident data. It is also probable that any data received would not necessarily help us to distinguish a pattern.

Instead, officers have looked into academic research into driver distraction and advertising. Members' attention is drawn to the article entitled "The impact of road advertising signs on driver behaviour and implications for road safety: a critical systematic review" (Transportation Research Part A, 122,

(2019) 85-98, Trespalacios, Truelove, Watson and Hinton). This is a systematic literature review of the academic research undertaken on this subject. It is attached as a supporting paper. Members are encouraged to read the whole paper. For convenience, some key findings have been extracted and are set out below:

"Some features of roadside advertising such as the changeability level have been consistently linked with changes in eye scanning behaviour of drivers (Beijer et al., 2004). Additionally, it seems that the impact that roadside advertising has on driving behaviour is greatly moderated by individual differences among drivers. Of great importance was that young drivers seem to invest more resources interacting with roadside advertising, suggesting a lower capacity to discriminate between relevant and irrelevant driving information (Stavrinos et al., 2016).

Based on the available evidence, it is not possible to conclude that there is a direct relationship between the driving behaviour changes that can be attributed to roadside advertising and subsequent road crashes. Most of the results in this respect remain inconclusive. However, there is an emerging trend in the literature suggesting that roadside advertising, particularly those signs with changeable messages, can increase crash risk (Cairney and Gunatillake, 2000; Sisiopiku et al., 2015). It is important to bear in mind that most of the empirical studies undertaken to date feature strong methodological limitations. Finally, roadside advertising technology is continually evolving, so there is a need for further research to ensure the recent technological advancements are addressed." (para 5.1).

"In this review, it is suggested that roadside advertising signs are associated with changes in crash risk. Unfortunately, findings from this review also revealed that research is not always conclusive regarding the mechanisms of these changes in crash risk. The lack of conclusive evidence limits the ability of policy-makers to apply risk-minimisation strategies. Nonetheless, roadside advertising is a legitimate business and public policy needs to manage the risks, not prohibit the activity." (para 5.2).

"Practical recommendations (para 5.3)

Some considerations also need to be made for the types of roadside advertising allowed and roadside advertising management. Concerning dwell time and transition, the following recommendations were defined based on current evidence:

- *The message dwell time should be designed to expose drivers to only one image per interaction with a roadside advertising sign. Evidence from on-road studies has confirmed that dwell times of 7 sec in a motorway (more than 100 kph) (Dukic et al., 2013) or 7–10 sec in a 104 kph road (Belyusar et al., 2016) attract more glances. At the moment, there is insufficient information on the right dwell time duration, but a reduction in the number of drivers seeing changes would suggest that a number larger than 10 sec would be a conservative approach.*
- *Stavrinos et al. (2016) documented that when a changeable roadside advertising sign transitioned to another image, there was an increase in glances longer than two seconds. Transitions that occur less than 154 m distance could result in fewer glances that last longer than two seconds.*
- *Transition duration is particularly problematic. Belyusar et al. (2016) explained that drivers are neurophysiologically predisposed to orient to motion and sudden change in the periphery. We*

recommend increasing the transition duration to avoid sudden motion or change. Design features and illumination guidelines could be utilised to mitigate these risks.

About location, the following recommendations were defined based on current evidence:

- *Roadside advertising should not be located in complex driving locations where the traffic conditions are likely to change rapidly, or in the centre of drivers' field of view (i.e., viewable from the centre of the windshield at any point during viewing) (Wilson and Casper, 2016).*
- *Drivers seem to display performance decrements even after their interaction with the roadside advertising sign is finished. A "recovery zone" (road segment with low driving demands and lack of unexpected risks) of at least 8 sec should be considered after digital roadside advertising signs (Schieber et al., 2014).*

Two key findings about illumination should be considered:

- *The illumination of roadside advertising is an important issue that needs to be regulated. Road advertisements should not be overbright, with the luminance of digital signs not exceeding that of static signs (Roberts, 2013).*
- *Additionally, luminance should be within 10–40 times the brightness of objects (e.g. headlights) within the driving environment to allow for transient adaptation effects (CTC, 2012).*

Future research (para 5.4)

- *Importantly, the full impact of roadside advertising signs on road safety requires further investigation, and this research needs to consider the wide range of road users, including motorcycle riders and pedestrians, and their interactions"*

The paper can be accessed via the following link, and is also supplied as a supporting document:
https://www.sciencedirect.com/science/article/pii/S0965856418310632?via%3Dihub

Officers would stress that the extracts set out above are considered most relevant to the questions members have asked, but members are encouraged to read the whole paper. Officers have not paraphrased any of the research, so as to avoid the risk of taking technical research and conclusions out of context.

The above research does not change the officer recommendation. The Committee are reminded of the need to determine the application on planning grounds and in accordance with the NPPF (para 132) and National Planning Practice Guidance.

2. **Addition of a condition limiting the screen's ability to change to daytime only (i.e. so it remains static at night).**

Members requested that officers explore a means by which the LPA can limit the time when images change to daytime only. Officers have drafted a condition which would require the applicant to submit a management plan to the LPA. This would require the applicant to set out how it would be ensured that the images on the screen changed (every ten seconds) during daytime hours only; the screen

would remain static at night. The applicant would be required to use a mechanism such as daylight sensors (or similar) to control the rate of change.

Officers put the principle of such a condition to the applicant who has stated that they would not agree to such a condition.

For the reasons set out in the initial officer report, the officer recommendation is for approval without such a condition, as it is not considered necessary.

3. Expected changes in cycle and foot traffic in the area

Members requested more information on the expected changes in foot and cycle traffic in the area of the application site over the coming years, including increases due to changing habits arising from the Covid-19 pandemic, and proposed regeneration in the St Philips Marsh area. It is worth noting that the application needs to be determined on the current situation, but future possible changes are set out below.

In the draft Bristol Local Plan Review (March 2019), the area is proposed to be designated as draft policy DM3 - St Philip's Marsh. It is identified as an area of growth and regeneration which will include mixed uses in a regenerated city quarter. As stated previously, the emerging policy has limited weight at this stage of plan preparation. However, the draft Local Plan does set out that the development in the area would need to be the subject of a detailed masterplan, which would coordinate the approach to development of St Philip's Marsh and the adjacent Bristol Temple Quarter. It states that opportunities will be taken to improve the connectivity of the area to neighbouring communities. It also states that proposals would retain and enhance the pedestrian/ cycle links to areas south of the River Avon.

Draft policy DM3's text states:

"Development will be supported by transport improvements which will including public transport enhancements, improved station access, enhanced connectivity with surrounding areas, cycle provision, pedestrian routes improvements and local highway improvements."

As discussed at the last committee meeting, the cycle path currently runs alongside the river, and this will remain the case. Since the Local Plan is still at the review stage, the above policy text is not adopted and can be given little weight. However, it can serve to illustrate the direction of travel. Since masterplanning for the St Philip's Marsh Area is at an early stage, there are no fixed proposals for the road layouts or details such as pedestrian or cycle crossings at this stage.

However, any major development in this area will lead to a significant change to the design and feel of the highway to make walking and cycling safer through reducing vehicle speeds and changes to the road widths, radii and large roundabouts, for example.

These improvements are long term and may not be in place by the time any advertisement is installed.

In terms of any improvements arising from predicted increases in cycling and walking arising from the Covid-19 pandemic, there are no specific proposals for the St Philip's Marsh Area. The Council is focussing on improvements to the City Centre, such as the proposals to pedestrianise streets

including Small Street and Corn Street and limit the use of Bristol Bridge to public transport, taxis, motorcycles, bicycles and pedestrians only.

Conclusion: The formal officer advice remains that the case is recommended for approval, and that the proposed conditions remain as per the initial (10 June 2020) committee report, and amendment sheet (10 June 2020).

RECOMMENDED GRANT subject to condition(s)

Time limit for commencement of development

1. Standard Advertisement time condition

   This consent shall be restricted to a period of five years from the date of the consent.

   Reason: This condition is specified by the Town and Country Planning (Control of Advertisements) (England) Regulations 2007.

Post occupation management

2. Standard Advertisement Conditions

   1. No advertisement is to be displayed without the permission of the owner of the site or any other person with an interest in the site entitled to grant permission.

   2. No advertisement shall be sited or displayed so as to:-

   (a) endanger persons using any highway, railway, waterway, dock, harbour or aerodrome (civil or military);
   (b) obscure, or hinder the ready interpretation of any traffic sign, railway signal or aid to navigation by water or air; or
   (c) hinder the operation of any device used for the purpose of security or surveillance or for measuring the speed of any vehicle.

   3. Any advertisement displayed and any site used for the display of advertisements, shall be maintained in a condition that does not impair the visual amenity of the site.

   4. Any structure or hoarding erected or used principally for the purpose of displaying advertisements shall be maintained in a condition that does not endanger the public.

   5. Where an advertisement is required under these Regulations to be removed, the site shall be left in a condition that does not endanger the public or impair visual amenity.

   6. No part of the advertisement(s) shall overhang the adopted highway.

   7. The proposed sign shall have a minimum clearance of 2.7 metres above the level of the adjoining footway and shall not project closer than 0.45 metres to the carriageway edge.

   8. Any advertisement displayed shall be finished and thereafter retained in non-reflective materials so as not to dazzle or distract motorists.

   9. Any illuminated advertisement shall be designed so that:-

(a) no part of the source of the illumination shall at any time be directly visible to users of adjacent adopted highway;
(b) static illumination is provided and shall not feature intermittent or flashing lights;
(c) At all times the advertisement will comply with the Institute of Lighting Professionals Professional Lighting Guide 05, 2014.
(d) moving features shall not be provided.

Reason: These conditions are specified by the Town and Country Planning (Control of Advertisements) (England) Regulations 2007 and to avoid undue distraction to motorists.

3. 1. The advertisement must have static images only for the lifetime of the development. No moving or apparently moving images, strobe or flashing lighting effects are permitted.

2. The advertisement must not contain any images which may be interpreted as road signs or emit sound, smoke or odours.

3. The advertisement must not change its image more than once in any ten second period for the lifetime of the development. No interactive messages or messaging sequences are to be displayed.

4. The proposed change in image method for the advertisement must use a fade/dissolve process and shall not give the appearance of movement for the lifetime of the development. Any sequential change between advertisements will take place over a period no greater than one second.

5. The advertisement shall be equipped with a dimmer control and photo cell which shall constantly monitor ambient lighting conditions and adjust sign brightness accordingly. The advertisement will go to a blank (dark) screen should it malfunction.

6. The luminance level of the advertisement must not exceed 150cd/m² during night-time hours (between 11pm and 6am) for the lifetime of the development. No part of the source of the illumination shall at any time be directly visible to users of the adjacent adopted highway.

7. Before the advertisement is displayed a monitoring scheme to assess the effect on highway safety shall be prepared, submitted to and approved in writing by the Local Planning Authority. Monitoring shall be carried out in accordance with the approved scheme unless otherwise agreed in writing by the Local Planning Authority.

8. The advertisement shall not be installed until an access, maintenance and inspection plan in relation to the advert unit has been prepared, submitted to and approved in writing by the Bristol City Council Development Management Local Planning Authority. Thereafter the advert unit shall be maintained in accordance throughout its lifetime in accordance with the approved plan.

9. When in operation the advertisement shall be monitored over a period of six months with reports produced on the luminance and effects on lighting of the adopted highway based on the surrounding lighting conditions, and the effects of the advertisement on road safety and in agreement with Local Planning Authority make recommended adjustments.

Reason: To avoid undue distraction to motorists.

List of approved plans

4. List of approved plans and drawings

The development shall conform in all aspects with the plans and details shown in the application as listed below, unless variations are agreed by the Local Planning Authority in order to discharge other conditions attached to this decision.

BST-009/001 REV 1 Site location and block plan, received 1 June 2020
BST-009-002 Existing and proposed elevations, received 17 March 2020
BST-009-003 Existing and proposed elevations, received 17 March 2020

Reason: For the avoidance of doubt.

Advices

1 Excavation Works on the Adopted Highway

The development hereby approved includes the carrying out of excavation works on the adopted highway. You are advised that before undertaking any work on the adopted highway you will require a Section 171 (Excavation) Licence from the Highway Authority which is available at www.bristol.gov.uk/highwaylicences

2 Structure Adjacent To/Within 6m of the Highway

The development hereby approved includes the construction of structures adjacent to or within six metres of the adopted highway. You are advised that before undertaking any work on the adopted highway you must prepare and submit an AiP Structural Report.

You will be required to pay technical approval fees (as determined by the proposed category of structure to be assessed) before the report will be considered and approved. Contact the Highway Authority's Bridges and Highway Structures Team at bridges.highways@bristol.gov.uk

commdelgranted
V1.0211

Supporting Documents

3. Unit 5 & 6 Marketside Industrial Site Albert Road BS2 0WA.

1. Impact on Road Advertising Signs on Driver Behaviour – Research Paper.
2. Site Location Plan
3. Existing And Proposed Views

Transportation Research Part A 122 (2019) 85–98

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The impact of road advertising signs on driver behaviour and implications for road safety: A critical systematic review

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ABSTRACT

Driver inattention and distraction are recognised as two of the most critical factors for road safety worldwide. While roadside advertising is often identified as a potential source of distraction, it has received less attention compared to other types of distractions such as texting or calling while driving. Therefore, this study focused on the impact of roadside advertising signs on driver behaviour and road safety. To examine this, a theory-driven systematic literature review was undertaken. In total, 90 unique documents were identified and reviewed using the Task-Capability Interface (TCI) Model to explain the potential safety impact of roadside advertising. The findings confirmed that the TCI model is a useful tool for describing the relationship between roadside advertising and driver behaviour. From this perspective, roadside advertising signs can be considered environmental clutter, which adds additional demands to the driving task. In particular, roadside advertising signs impaired eye movement patterns of drivers. Additionally, it was demonstrated that the impact of roadside advertising on driving behaviour is greatly moderated by individual differences among drivers. Of great importance was that young drivers invest more attentional resources in interacting with roadside advertising, which suggests a lower capacity to discriminate between relevant and irrelevant driving information. Based on the available evidence, however, it is not possible to definitively conclude that there is a direct relationship between the driving behaviour changes attributed to roadside advertising and road crashes. Nonetheless, while most studies remain inconclusive, there is an emerging trend in the literature suggesting that roadside advertising can increase crash risk, particularly for those signs that have the capacity to frequently change (often referred to as digital billboards). Lastly, it is important to mention that most of the empirical studies undertaken to date feature strong methodological limitations. Consequently, there is an urgent need for more research in this area, given that roadside technology and the transport system are changing rapidly.

1. Introduction

Driving as a transport behaviour delivers important social and economic benefits, but also poses significant risks to quality of life, including injury and death. Worldwide, over 1.2 million people die each year as a result of injuries sustained from road crashes (WHO, 2015). Economically, injuries and death that result from road crashes cost governments on average 3% of their gross domestic product (WHO, 2015). Notable improvements in technologies such as cooperative intelligent transport systems and driving automation are

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Available online 27 February 2019

expected to benefit road safety in the future. However, recent estimates suggest that large benefits are only likely to be observed in the long term—25 to 30 years—(Dia, 2015) due to numerous challenges related to infrastructure investment (Clark et al., 2016), public perception (Kyriakidis et al., 2015), and vehicle design policies (Smith, 2016). Until active safety technologies are completely accessible to all drivers, it will remain necessary to develop and implement effective road safety countermeasures to prevent road trauma.

Inappropriate or inadequate interactions between drivers and vehicles play a significant role in vehicle collisions. Driver performance is influenced by a wide range of factors, including fatigue (Filtness et al., 2012), distraction (Regan et al., 2011), mood (Rhodes et al., 2015), etc. Among these, distraction is recognised as one of the most critical factors for road safety worldwide (WHO, 2011). Conservative estimates suggest that distracted drivers are heavily overrepresented in road traffic crashes (Beanland et al., 2013). Distracted driving involves sharing attention between the primary task (driving) and a non-driving related secondary task. The non-driving related secondary task can be in-vehicle (e.g., mobile phones conversations, in-vehicle infotainment interactions, etc.) or external (e.g., reading roadside advertising signs, looking at non-related landscape elements, etc.).

Roadside advertising signs (often referred to in the literature as billboards) have become a common form of advertising around the world. As such, the impact of these signs on road safety is an area that needs a strong research focus to support policy decisions. Technology is evolving exponentially, and this extends to the technology utilised by road advertising companies. For example, an advertising company has recently created a sign that tailors its advertisements based on how heavy the traffic is (Adweek, 2018). This roadside advertising technology has been used to advertise restaurants, where simple images of food items are presented in fast-flowing traffic with the purpose of stimulating drivers' appetite. Meanwhile in heavy traffic, the advertisement changes to the words 'stuck in a jam? There's light at the end of the tunnel' with a picture of the restaurant logo. In addition, some advertising companies are considering creating personalised messages on roadside advertising signs for specific individuals via number plate recognition (Global Marketing Alliance, 2018) or new delivery modes such as turning other vehicles' windows into video billboards (Kumparak, 2018). These emerging technologies highlight the necessity of an up-to-date review of the literature in this area.

1.1. The interaction between driving and roadside advertising signs

Driving is a complex task that involves extensive interactions between road users and the other components of the transport system such as the driver, the vehicle, and the road traffic environment. Additionally, each component of the transport system includes various elements which can have an impact on driving performance (Rothengatter, 1997). For example, a person with 10 years' driving experience travelling at the speed limit on a clear highway is likely going to demonstrate a different level of performance than someone who has less experience and is driving on the same highway with multiple noisy passengers. Drivers' individual differences and the wide range of elements in the road traffic environment necessitate the implementation of systemic frameworks to analyse driving and manage safety risks (Scott-Parker et al., 2015; Oviedo-Trespalacios et al., 2018).

Various theoretical frameworks have been developed to conceptualise the driving task and explain safety risks. A notable framework that has the ultimate goal of explaining crash risk is the Task-Capability Interface (TCI) model developed by Fuller (2000). Using a driver-centred approach, the TCI model focuses on two key elements relating to the driving task: (i) the task demands experienced by drivers, and (ii) the driver's capability. The driving task requires the driver to successfully travel from one location and arrive at another while also avoiding safety-threatening events (Oviedo-Trespalacios et al., 2016). The difficulty of completing this task is affected by a number of factors including the environment, control characteristics of the vehicle such as speed or trajectory, the driving behaviour of others, and the communication between drivers on the road. The resulting difficulty of the task is what is referred to as task demands (Fuller, 2000). The ability to successfully meet these task demands and complete a successful trip is dependent on the driver's capability. Within the TCI model, a driver's level of competence (skills and knowledge) interacts with human factors (fatigue, emotions, substances, distraction, etc.) to determine the driver's capability. The model explains how human factors can influence a driver's capability but do not influence the task demands. Using these definitions, the TCI model provides a simple conceptualisation of how task demands and driver capability can explain the interactions between the driver, the vehicle, and the environment, which will lead to either positive or negative driving outcomes. Roadside advertising signs are part of the road traffic environment and, therefore, serve to modify the driving task demands (see Fig. 1). This could be problematic because drivers' attentional resources (drivers' capability) might not be sufficient to both safely drive and interact with the roadside advertising sign.

More specifically, the balance of capability and task demands impacts on the perceived difficulty of the task and the task outcome. In other words, in any given situation a matrix of competence and task demands will exist such that if the task demands are low, then the task is perceived as not difficult for drivers with low and high capability. However, if the task demands are high, then those with low capability will find the task more difficult than those with high capability. Similarly, if a driver's capability is impaired, a task can quickly become more difficult than it was previously perceived. In the same way that the balance of capability and task demands impacts perception, it also relates directly to the driving outcomes. As shown in Fig. 1, when the capability is higher than task demands, the driver can maintain control. However, if the task demands exceed the driver's current capabilities, the driver would potentially lose control. This loss of control will likely lead to a crash unless action is taken to ensure safety. Applications of the TCI model have demonstrated its usefulness in explaining speed selection (Fuller, 2011), mobile phone use while driving (Oviedo-Trespalacios et al., 2017a,b), and other driving behaviours.

1.2. Current study

Despite the relatively widespread use of roadside advertising, scientific understanding about its impact on task demands is limited. Firstly, the available literature is disorganised and limited compared to other road safety concerns such as mobile phone distracted driving, fatigue, speeding, etc. Secondly, roadside advertising signs are continuing to evolve technologically, creating the

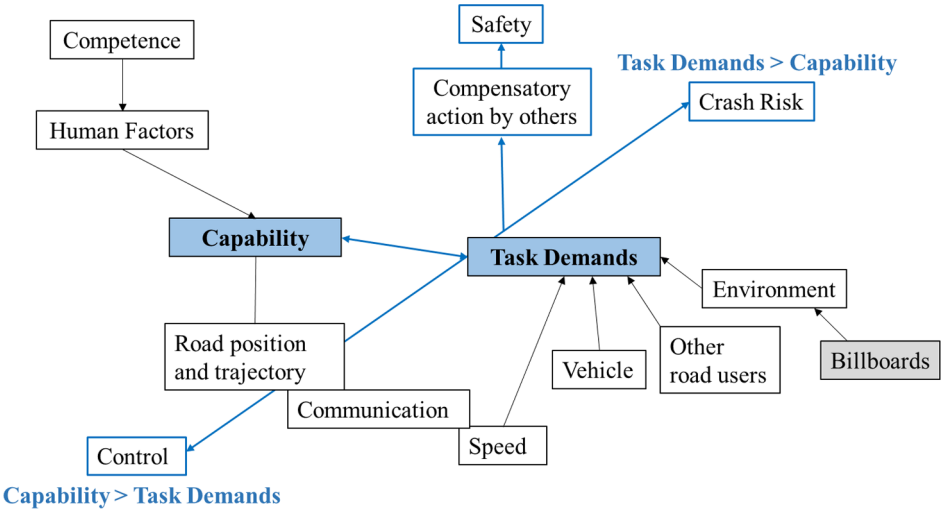

Fig. 1. Modification of the task capability interface model.

need for ongoing research to address recent technological advancements. For example, over the last 50 years, roadside advertising signs have evolved from static images to incorporate digital displays and changing pictures/videos designed to capture drivers' attention. Therefore, these technological differences are likely to influence driving task demands in different ways. To close this gap, we conducted a comprehensive systematic literature review informed by the TCI model.

2. Method

A literature review was selected as the most appropriate method of research to address the question of whether roadside advertising signs impact on driver behaviour and crash risk. Given the number of components and causal mechanisms theoretically described in the TCI model, a systematic classification scheme (SCS) was developed to guide and assist in synthesising the available literature. As described in the introduction, the TCI model proposes that crashes are a result of impaired driver behaviour (i.e., longitudinal and lateral vehicle control including eye movements) which is a function of driving demands exceeding driver capability. The SCS adopted in this study consists of the following four questions:

- What was the study design (e.g., simulator studies, naturalistic studies)?
- What variations in driving demands were considered (e.g., presence of roadside advertising, vehicle type, road traffic environment, etc.)?
- What variations in the driver's capability (e.g., driver demographics, driving experience, etc.) were included?
- What safety performance metrics (e.g., crashes, near-misses, etc.) were investigated?

The retrieved documents were also analysed based on the type of publication (e.g., journal article, conference paper, report etc.).

2.1. Search strategy

All searches included the words "driving" as mandatory, followed by the terms "advertising" or "billboard" and were conducted in February 2018. These terms were sought in the full text of the references. The search of academic references and grey literature was conducted in Google scholar and academic databases, i.e., PROQUEST, SCOPUS, TRID, EBSCO, and Web of Science. No time frame was specified in the searches. Besides, a request was sent to the Department of Transport and Main Roads (Queensland, Australia) to obtain access to the literature utilised in their policymaking. With regards to exclusion criteria, studies explaining roadside characteristics without considering road users' behaviour were excluded as well as road authorities communicating driving-related information (e.g., directions or work zones) to drivers.

3. Results

A total of 90 unique documents were identified and reviewed using the SCS. The process to identify the articles followed a PRISMA methodology (Moher et al., 2009) as described in Fig. 2. These studies were divided in two groups: (i) documents including original research data (n = 60) and (ii) documents including reviews or position papers (n = 31). The number of references in this list is 91 because the conference paper by Herrstedt et al. (2013) was counted twice as it included original research and a literature review. The final studies included in the synthesis consisted of 28 journal articles, 24 literature reviews (published in the form of journal articles, reports, conference papers, and book chapters), 15 conference papers, 12 reports, 4 theses, 1 handbook chapter, 2 letters to the editor, 3 opinion/position papers and 2 paper critiques. The literature review findings are presented in the Appendix.

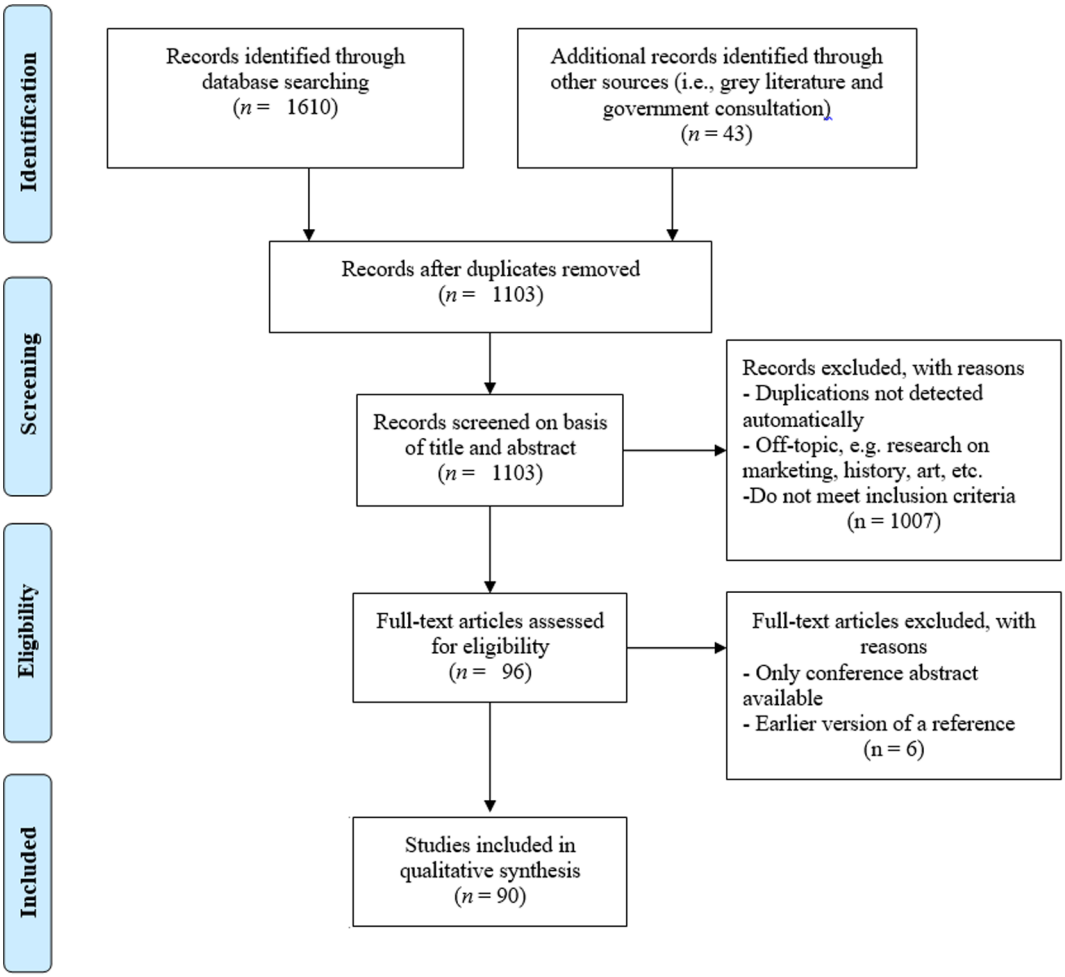

Fig. 2. PRISMA flow diagram.

4. Discussion

The discussion section is divided into four sections, corresponding to the questions identified in the SCS.

4.1. Methodological approaches and issues

The main approaches utilised in the available literature to study the effects of roadside advertising on driver behaviour and safety included: crash data analyses; on-road studies; laboratory observations; and self-report studies. Crash data analysis involves studying patterns in police or medical records to identify the potential effects of roadside advertising on crash involvement at particular places and times. On-road observations comprise naturalistic and quasi-naturalistic studies that involve observing the driver's behaviour, in uncontrolled or controlled environments. Laboratory observations, which include high-fidelity and desktop driving simulators, have been utilised extensively in road safety research, as they are a low risk and low cost option for studying driving behaviours while controlling for different factors. Self-report studies include questionnaires regarding drivers' perception of the impact that roadside advertising signs have on driving behaviour.

In the context of distracted driving, crash data is acknowledged as the key performance measure for safety (Oviedo-Trespalacios et al., 2016). However, only 15% of the references with new data (i.e., excluding reviews and opinion pieces) use crash data to study the effects of roadside advertising. Some examples of roadside advertising safety research using crash data include Yannis et al. (2013) and Izadpanah et al. (2014). The provision of ongoing and reliable crash data is a critical component of evidence-based road safety practice and research. Crash data is usually provided by government-related entities; with the most common source being crash reports (e.g. police or health-care providers). However, there are several limitations associated with crash data from police or hospital sources. These include the under-reporting of low severity crashes, low occurrence of crashes linked to distraction, and lack of detail about the behaviour preceding the crash. Therefore, it is reasonable to argue that crash data, albeit a critical indicator, should not serve as a unique and standalone tool for informing evidence-led initiatives in roadside advertising safety.

Various authors have developed important safety evaluation methods based on naturalistic and simulated driving behaviour observations. These result in the predominant forms of evidence relating to the safety effects of roadside advertising. With new technological developments in in-vehicle driving monitoring, naturalistic studies have become more common in the distracted driving literature. Examples of roadside advertising research that used naturalistic or simulated driving methods include Perez et al. (2012), Rasdorf et al. (2017) and Zalesinska (2018). Traditionally, driving simulators are considered the principal tool for road safety laboratory research. Driving simulators have been developed using advances in computer technology and are nowadays cheaper and safer than in-vehicle or on-road testing. Generally, in simulator studies, it is possible to observe driving behaviour, near-misses, and crashes. Although intuitively, the best option for studying crashes would be in a controlled environment such as a simulator, difficulties arise because crashes are rare events (Svensson and Hydén, 2006). The lack of crashes limits the identification of patterns, the generalizability of results, and subsequent external validity of the finding. To overcome these limitations, the use of surrogate safety measurements as a way of studying driving performance has been a frequent practice in the distracted driving literature. These surrogate measures include: acceleration, headway distance, lane position, speed, among others. Yan et al. (2008) validated a set of surrogate measures for evaluating safety in signalised intersections through a comparison of crash reports and simulator data. As a result, risky driving parameters such as levels of speed, acceleration, and headway are accepted as surrogate measures of safety. Nonetheless, driving simulators are often questioned concerning their resemblance to real-world driving and vehicle motion. Even the most sophisticated driving simulators do not provide all of the visual, vestibular, and proprioceptive changes that occur when driving. Validation studies of high-fidelity simulators conducted by Meuleners and Fraser (2015) and Larue et al. (2018) have demonstrated the relative validity of driving simulators compared to real-world driving. Therefore, simulators could potentially be utilised to study driving behaviour in the presence of roadside advertising while ensuring external validity.

The number of studies using self-reported data was relatively low (less than 10%). Examples of roadside advertising studies that used self-reported data include Hasan (2015) and Olejniczak-Serowiec et al. (2017). Self-reported data, including questionnaires or interviews, could explain crash circumstances and conflicts with roadside advertising. Although self-reported data suffers from several drawbacks related to human factors such as memory or social desirability bias, it could help to triangulate findings and inform potential risks. Qualitative or mixed research methods can provide valuable insight into road users conflicts with roadside advertising, which are not detected in controlled studies.

4.2. Impacts on driving task demands

Driving task demands are a function of the elements within the traffic system external to the driver, including the road traffic environment, road furniture, vehicle, weather, etc. The task-capability interface model (Fuller, 2000) suggests that an understanding of the determinants of road demands would help to support safe driving. The main driving task demands variables considered in the reviewed literature are discussed below.

4.2.1. Demands of the road traffic environment

The road traffic environment moderates the impact that roadside advertising has on driving. A consistent finding in the literature is that the presence of roadside advertising seems to be correlated with road crashes (Sisiopiku et al., 2015; Wallace, 2003). Authors such as Molino et al. (2009) advise that commercial signs should be completely avoided at intersections (or nearby). Notwithstanding this finding, there is very little information in the literature on the impact that roadside advertising signs have on secondary roads or rural areas.

Studies involving the impact of speed limits on drivers' roadside advertising interactions (e.g. reading, thinking about or avoiding the sign) have been limited. Misokefalou et al. (2016) reported a non-significant difference in the duration of engagements with roadside advertising signs and other non-related roadside objects between speeds over and under 80 km/h. Additionally, most of the empirical and observational studies have been undertaken during the day. An exception is an on-road study conducted by Dukic et al. (2013) which included night and day driving. The results showed that there are no significant differences between day time and night time attention to electronic roadside advertising signs. There is a need to undertake more systematic evaluations examining the impact of these signs in a broader range of traffic environments.

4.2.2. Roadside advertising sign type

The references reviewed confirmed that there is a wide range of roadside advertising sign types. The two types most frequently cited in the literature are static and changeable (also known as digital, electronic or roller bar). Additionally, some studies have specialised in emergent or currently less common road advertising technologies such as video-based signs, business logo signs, LED signs, tri-vision signs etc. Roadside advertising technologies are continuously evolving. Emergent roadside advertising technology includes advertisements which target specific individuals via number plate recognition (Global Marketing Alliance, 2018), as well as advertisements which change based on the traffic conditions (Adweek, 2018). As these are new technologies, they have not been studied or included in any study. Given that road advertising technologies are constantly changing, there is a need for ongoing monitoring of the risks associated with emergent technologies.

At this point, the broad diversity of technologies limits our capacity to generalise findings about the impact of advertising on road safety. On the one hand, there is insufficient evidence regarding the impact of each type of roadside advertising on road safety. A clear example of this is that less than 5% of reviewed references included video-based advertising. On the other hand, the available evidence needs to be evaluated with consideration of the socio-technical factors that may have varied from one location to another. For example, the impact of a roadside advertisement located in Southeast Europe may well be different to the road safety outcomes of

the same roadside advertisement in Australia, given the inherent differences across the regions concerning road standards, driver behaviour, road traffic composition, weather, etc.

Notwithstanding the limitations of the current literature, the degree of changeability in the information conveyed by the roadside advertising signs appears to have a persistent adverse effect on driver behaviour. The degree of changeability refers to the amount of information displayed by the roadside advertisement and can vary considerably from static signs to those that can display video or multiple images successively. Static roadside advertisements are passive in nature, since they convey a single image. In contrast, changeable signs are more active since they convey a collection of images that change at predetermined times. The most active form of changeable signs is video advertising signs, which can show multiple images at high speed. It is important to consider that changeable signs (including digital, electronic or roller bar signs) are simplified versions of video advertising signs as they present a limited number of images that change at specified times (remaining in passive mode the majority of the time).

When comparing the effect of different types of roadside advertising signs on driver task demands, it has been demonstrated that changeable (i.e., digital with multiple advertising signs) roadside advertising signs represent a greater distraction to drivers than static (i.e., single advertising sign) roadside advertising signs (Beijer et al., 2004; Decker et al., 2015; Herrstedt et al., 2013; Missokefalou and Eliou, 2012). Indeed, a recent study demonstrated that static roadside advertising does not affect situation awareness of drivers (Young et al., 2017). This has been primarily attributed to the movement involved in changeable roadside advertising signs, which is more likely to capture the attention of the driver (Missokefalou and Eliou, 2012). A recent study using on-road testing suggested that rapid light onsets of changeable roadside advertising signs could result in a sudden shift of visual attention (Belyusar et al., 2016). Additionally, it has been found that a driver's gaze duration is longer and occurs more often when looking at changeable signs compared to static signs (Chattington et al., 2009; Dukic et al., 2013; Belyusar et al., 2016; Decker et al., 2015). A potential explanation for this is that drivers might anticipate the change. When drivers' opinions of this distraction have been investigated, it has also been found that drivers perceive videos, special effects and animation on roadside advertising, to be more distracting (Yellappan et al., 2016; Smiley et al., 2005). Therefore, changeable roadside advertising (i.e., active) has been shown to have a stronger effect on driver distraction compared to static roadside advertising (i.e., passive).

The location and physical attributes of the roadside advertising are associated with the level of attention given by drivers. As described by Wilson and Casper (2016), the proximity to the driver's window of attention and location of the roadside advertising are the most important variables for predicting attention, i.e., roadside advertising signs are more likely to be noticed if they are closer to the road, have a centre approach, have a longer amount of time in which it is visible to those who pass by it, and are larger in size.

The impact of business logo signs on motorways has been an emergent topic in the scientific literature. Generally, supplementary signs do not seem to reduce safety (Metz and Krüger, 2014). A simulator study conducted by Rasdorf et al. (2017) confirmed that six- and nine-panel signs did not result in glances larger than 2 s. Typically, off-road glances longer than 2 s have been found to increase near-crash and crash risks by at least two times that of normal baseline driving (Klauer et al., 2006). However, using the two-second guideline is problematic because drivers might not instantly recover their performance on safety-critical driving tasks such as hazard perception (Borowsky et al., 2016). On the other hand, Zahabi et al. (2017) reported that a nine-panel roadside advertisement resulted in a larger reduction in driving speed in comparison to six panels. Although visual allocation of attention does not seem impaired, there could be a risk of traffic conflicts due to the reduced speed. More research is necessary to confirm this.

4.2.3. Roadside advertising sign level of illumination

The literature reviewed supports the conclusion that the level of brightness and illumination of roadside advertising has an important effect on driver behaviour. Changing luminance within a visual field will reflexively attract a driver's gaze (CTC, 2012; Roberts et al., 2013). As such, many researchers have claimed that digital roadside advertising signs present a higher safety risk for the general public as the changes in luminance are more likely to catch a driver's attention than traditional static signs (CTC, 2012; Herrstedt et al., 2017; Roberts, 2013). Furthermore, digital roadside advertising signs also hold a driver's attention for longer than standard floodlit signs (Birdsall, 2008; CTC, 2012). Herrstedt et al. (2017) conducted a simulation experiment investigating how LED-advertising signs impacted the driver's attention. The researchers found that average glance duration at LED signs was longer when compared to other types of objects (i.e. anything the driver looked at for more than one second, including static, non-LED advertisements, spectacular objects, and driving relating objects such as road signs, road users, mirror/speedometer etc.).

While research demonstrates that changing luminance is more likely to attract and hold a driver's attention, limited experimental research is available to show that this distraction will lead to a greater risk of safety-threatening events. Indeed, some correlational studies investigating how the introduction of a digital advertising sign impacts crash rates have failed to find a significant effect (Hawkins et al., 2012; Izadpanah et al., 2014; Yannis et al., 2013). Despite limited research connecting luminance to crash risk, Zhang et al. (2017) have reported that over-bright highway roadside advertising signs can cause visual discomfort, further increasing associated risks.

A number of recommendations and regulations are set in place to minimise risk for drivers. Australia currently regulates luminance changes for digital roadside advertising signs, and within the states of Queensland and New South Wales, moving images are not permitted (OMA, 2013). Roberts (2013) argues that luminance levels of digital roadside advertising signs should be equal to the brightness of static signs in the same ambient lighting condition. Other sources recommend that luminance should be within 10 to 40 times the brightness of objects (e.g. headlights) within the driving environment to allow for transient adaptation effects (CTC, 2012). Zalesinska's (2018) recent study indicated that areas with a size of over 0.58 m × 0.38 m and luminance of more than 400 cd/m^2 were associated with deteriorations in visual performance of the observers. Finally, the recommended change in luminance between day and night also varies from 20 to 50% (Jenkins, 2016).

4.2.4. Roadside advertising sign content

The content of roadside advertising signs has been found to have features that influence driver behaviour. The features that have been more thoroughly investigated include the number of words, emotional valence, human representation, and design characteristics. Studies have shown decreased lane keeping and longer gaze durations when participants are presented with roadside advertising signs that have a larger number of words to read (Schieber et al., 2014). Schieber et al. (2014) proposed that processing overload emerged when participants were presented with eight or more words on a digital roadside advertising sign.

Drivers' responses are also influenced by the emotional or arousal content of the roadside advertising signs. A driver's sensitivity to sexualised or attractive static images has been found to increase their level of gaze distraction (Targosiński, 2017). Additionally, the presence of negative emotional content on roadside advertising signs is associated with an increase in drivers' reaction time and steering variations (Rodd, 2017). Chan and Singhal (2013) found that negative and positive valence words impaired driving speed. Likewise, it was also reported that taboo words (taboo-related arousal) seem to enhance attentional focus (Chan et al., 2016). The interactions between drivers and textual content need to be considered in future risk assessments.

Human representation on roadside advertising signs also appears to influence drivers' behaviour. Tarnowski et al. (2017) found that drivers were more distracted by roadside advertising signs where humans were represented than by signs where humans were not present.

The design characteristics of the roadside advertising have also been found to affect driving performance. Based on an analysis of drivers' perceptions using data mining techniques, Marciano and Setter (2017) proposed that roadside advertising signs can be classified into at least three groups:

- Loaded roadside advertising signs are characterised as colourful, containing proportionately small quantities of graphic elements and large quantities of text. The text itself consists of many letters of all sizes. Also, these roadside advertising signs contain many logos and many information items.
- Graphical roadside advertising signs are characterised as colourful, containing large quantities of graphic elements and small quantities of text.
- Minimal roadside advertising signs are characterised by few or no graphic elements, few colours, and a small amount of text with mainly large letters.

Marciano and Setter (2017) found that loaded roadside advertising signs seem to interfere more with drivers' tracking performance and continuous motor performance than graphical and minimal signs. Indeed, minimal roadside advertising signs do not seem to interfere with any of the experimental tasks explored in their study.

4.2.5. Vehicle type

Vehicle type of the driver is one of the variables that has had limited consideration. Cars are the most frequent vehicles analysed in most studies. There is, however, one study (see Megías et al., 2011) that involved a motorcycle simulator. The results showed that motorcycle riders also experience impaired reaction time in the presence of static roadside advertising signs with negative valence.

4.3. Impacts on driver capability

A driver's capability is a function of a plethora of human factor variables, including personal characteristics, physiological characteristics, personal experiences, psychological resources, etc. Although accounting for all these variables would be ideal, the large number of these human factors makes it difficult to study them systematically. Nonetheless, key human factor variables have been explored in relation to roadside advertising signs, as outlined below.

4.3.1. Age and driving experience

Age and driver experience are associated with the different outcomes in the interactions between drivers and roadside advertising signs. Research has consistently found that older drivers (generally aged 65 years or older) are negatively impacted by the presence of roadside advertising signs. Edquist et al. (2011) found that older drivers made more lane change errors, particularly in the presence of static roadside advertising signs, than drivers in other age groups (18–25 or 26–55). This is not surprising since research has suggested that age-related medical conditions and declining of functional/cognitive abilities often contribute to higher crash risk among senior drivers (Asbridge et al., 2017). Research in traffic psychology has consistently reported that older drivers engaging in secondary tasks while driving are typically more affected than young drivers (Fofanova and Vollrath, 2011).

Teens and young drivers seem to give significantly more attention to roadside advertising. A study conducted by Stavrinos et al. (2016) found that drivers aged 16–19 years give longer glances to roadside advertising signs (digital or static) compared to drivers aged 35+ years. Roadside advertising signs appear to have an effect on the driving performance of young adults, as the age group (16–24) shows a slower reaction time to hazards (Farbry et al., 2001); greater levels of distraction to both digital and static signs (Stavrinos et al., 2016); and self-reported agreement that both static and digital signs create distraction when driving (Sisiopiku et al., 2015). In contrast, other studies have shown no age differences in the detection of static roadside advertisements (Topolšek et al., 2016) or eye glance behaviour in response to static and digital roadside advertising signs (Lee et al., 2004). More research is needed to fully determine the effect of roadside advertising on young drivers.

4.3.2. Gender

Research also suggests that gender can have an impact on responses to static roadside advertising sign content, with women showing greater distraction in response to advertisements evoking negative emotions, and men showing greater distraction to advertisements with sexual content (Olejniczak-Serowiec et al., 2017). Overall, men appear to be more likely to read digital roadside advertising signs than women (Islam, 2015); however, women appear to have longer gaze duration than men, meaning that they were distracted for a longer time period (Lee et al., 2004). It is important to emphasise that research into gender differences is limited, and the significant results only displayed small effect sizes. As such, these findings should be treated with caution.

4.3.3. Other personal characteristics

The level of distraction an individual may experience when driving past a roadside advertising sign may also differ according to transient factors such as fatigue and motivations (Horberry and Edquist, 2008). Also, it has been suggested that a driver's level of distraction might increase depending on whether the content of the sign is appealing to an individual or not (Chattington et al., 2009). While these factors have been identified as important, their effect on a driver's level of distraction when driving past roadside advertising signs has not yet been examined. It is also possible that more permanent personal characteristics such as beliefs towards safety or personality could influence this distraction; however, research is yet to explore this.

4.4. Safety implications of roadside advertising signs

Analysis of crash data has suggested a link between roadside advertising signs and safety (Cairney and Gunatillake, 2000; Sisiopiku et al., 2015). Research suggests that crash risk increases by approximately 25–29% in the presence of digital roadside advertising signs compared to control areas (Islam, 2015; Sisiopiku et al., 2015). On the other hand, static roadside advertising signs have not been linked with differences in the crash count (Yannis et al., 2013). However, this finding is contrary to previous research that suggests differences in crash counts exist in the presence of static roadside advertising, see Staffeld (1953) and Ady (1967). The quantity and quality of available evidence limit our conclusion.

Fixed object, side swipe and rear end crashes are the most common types of crashes in the presence of roadside advertising signs (Islam, 2015; Sisiopiku et al., 2015). In addition, drivers showed increased eye fixations and increased drifting between lanes on the road (Sisiopiku et al., 2015; Young and Mahfoud, 2007). In their meta-analysis of existing studies investigating digital roadside advertising signs; Sisiopiku et al. (2015) found an increased crash risk as a result of digital signs, however, the effect was exclusive to sections of road with intersections.

Studies into the before-and-after effects of the installation or removal of roadside advertising signs did not find a significant difference in crash prevalence when the sign was present on the road compared to when the sign was not present (Hawkins et al., 2012; Izadpanah et al., 2014; Yannis et al., 2013). These findings may demonstrate that drivers can self-regulate their interactions with roadside advertising (as they do with other distractions, see Oviedo-Trespalacios (2018)) and, therefore, it could be problematic if the roadside advertising design prevents self-regulation among drivers. For example, a roadside advertising sign can capture drivers' attention in moments of high driving demands such as heavy traffic or potential road hazards. As such, drivers would not be able to safely manage the additional workload.

5. Conclusion

5.1. Key findings

The evidence regarding roadside advertising safety has been widely scattered with little attempt to explore systemic patterns. This has hindered effective risk characterisation and an understanding of the mechanisms through which certain roadside advertising characteristics contribute to road crashes. To address this gap in the literature, the current study revised literature using a systematic approach informed by the Task-Capability Interface (TCI) model (Fuller, 2000). The TCI model is a seminal theoretical framework that explains determinants of driving behaviour and crash risk. To ensure a structured and efficient approach, the PRISMA framework (Preferred Reporting Items for Systematic Reviews and Meta-analysis) was used to guide this process (Moher et al., 2009).

A total of 90 unique documents were identified and reviewed using the Task-Capability Interface (TCI) Model. Overall, the findings show that the TCI model is useful in explaining the relationship between roadside advertising and driver behaviour. Roadside advertising signs were considered to be environmental clutter, which adds additional demands to the driving task. For example, some features of roadside advertising such as the changeability level have been consistently linked with changes in eye scanning behaviour of drivers (Beijer et al., 2004). Additionally, it seems that the impact that roadside advertising has on driving behaviour is greatly moderated by individual differences among drivers. Of great importance was that young drivers seem to invest more resources interacting with roadside advertising, suggesting a lower capacity to discriminate between relevant and irrelevant driving information (Stavrinos et al., 2016).

Based on the available evidence, it is not possible to conclude that there is a direct relationship between the driving behaviour changes that can be attributed to roadside advertising and subsequent road crashes. Most of the results in this respect remain inconclusive. However, there is an emerging trend in the literature suggesting that roadside advertising, particularly those signs with changeable messages, can increase crash risk (Cairney and Gunatillake, 2000; Sisiopiku et al., 2015). It is important to bear in mind that most of the empirical studies undertaken to date feature strong methodological limitations. Finally, roadside advertising technology is continually evolving, so there is a need for further research to ensure the recent technological advancements are addressed.

5.2. Policy implications

Advertising signs directed at road users are designed to communicate messages to the driving public. For the advertising industry, roadsides are sought-after, well established and increasingly profitable locations for advertising signs. Although the industry acknowledges the importance of safety, advertisers are not accountable for road safety and efficiency or the prevention of road trauma. Notably, government road agencies work to minimise driver distraction potential while advertisers seek to optimise it (Horberry et al., 2013). In this review, it is suggested that roadside advertising signs are associated with changes in crash risk. Unfortunately, findings from this review also revealed that research is not always conclusive regarding the mechanisms of these changes in crash risk. The lack of conclusive evidence limits the ability of policy-makers to apply risk-minimisation strategies. Nonetheless, roadside advertising is a legitimate business and public policy needs to manage the risks, not prohibit the activity. Commercial and community interest in roadside advertising is growing. Government road agencies also use roadside advertising signs for road safety campaigns and to communicate information about severe weather events and critical safety alerts (for example, child abductions). Given this demand trajectory, comprehensive empirical research will enable road regulators to develop robust technical standards that can be reliably and consistently applied across road agencies.

When setting public policy and technical standards, road agencies are reluctant to adopt subjective and qualitative guidelines, preferring to rely on defensible criteria drawn from independent evidence-based research. Without unequivocal evidence, some government road agencies develop technical criteria based on risk management and engineering principles substantiated by human factors, safety-in-design or driver-centred design approaches (Horberry et al., 2013). While these methods are reasonable, businesses and industries are challenging the legitimacy of road agencies' technical criteria citing the absence of systematic and supporting empirical data. Private sector practitioners are engaged to produce reports and make submissions outlining the rationale for why an advertising sign should be approved, despite its non-compliance with regulators' requirements or sufficient regard for human factors or ergonomic principles. In some instances, when applications for advertising signs are rejected on road safety grounds, applicants pursue their cases through the courts (Dulebenets et al., 2018; Sharpe, 2011).

As roadside advertising technologies are continually changing, there is a need for ongoing monitoring of the risks associated with emergent technologies. Therefore, continued monitoring of roadside advertising technologies and generation of safety data is necessary. Legislation in some jurisdictions such as the US has not progressed as fast as the roadside advertising technology (Sharpe, 2011). Likewise, although roadside advertising should naturally be driven by road safety concerns, some other policy considerations should be weighted as well e.g., scenic beauty (Sharpe, 2011) and clutter (Beijer et al., 2004). Sharpe (2011) explains that if left effectively unregulated, current technologies of roadside advertising would destroy the scenic vistas and put drivers (and other road users) at risk.

5.3. Practical recommendations

Some considerations also need to be made for the types of roadside advertising allowed and roadside advertising management. Concerning dwell time and transition, the following recommendations were defined based on current evidence:

- The message dwell time should be designed to expose drivers to only one image per interaction with a roadside advertising sign. Evidence from on-road studies has confirmed that dwell times of 7 sec in a motorway (more than 100 kph) (Dukic et al., 2013) or 7–10 sec in a 104 kph road (Belyusar et al., 2016) attract more glances. At the moment, there is insufficient information on the right dwell time duration, but a reduction in the number of drivers seeing changes would suggest that a number larger than 10 sec would be a conservative approach.
- Stavrinos et al. (2016) documented that when a changeable roadside advertising sign transitioned to another image, there was an increase in glances longer than two seconds. Transitions that occur less than 154 m distance could result in fewer glances that last longer than two seconds.
- Transition duration is particularly problematic. Belyusar et al. (2016) explained that drivers are neurophysiologically predisposed to orient to motion and sudden change in the periphery. We recommend increasing the transition duration to avoid sudden motion or change. Design features and illumination guidelines could be utilised to mitigate these risks.

About location, the following recommendations were defined based on current evidence:

- Roadside advertising should not be located in complex driving locations where the traffic conditions are likely to change rapidly, or in the centre of drivers' field of view (i.e., viewable from the centre of the windshield at any point during viewing) (Wilson and Casper, 2016).
- Drivers seem to display performance decrements even after their interaction with the roadside advertising sign is finished. A "recovery zone" (road segment with low driving demands and lack of unexpected risks) of at least 8 sec should be considered after digital roadside advertising signs (Schieber et al., 2014).

Two key findings about illumination should be considered:

- The illumination of roadside advertising is an important issue that needs to be regulated. Road advertisements should not be overbright, with the luminance of digital signs not exceeding that of static signs (Roberts, 2013).

- Additionally, luminance should be within 10–40 times the brightness of objects (e.g. headlights) within the driving environment to allow for transient adaptation effects (CTC, 2012).

It is important to note that the practice recommendations are likely only to apply to passenger car drivers, given the limited amount of research conducted using other road users. Evidence from the literature review suggests that motorcycle riders directly modify their vision towards billboards (their average fixation duration when viewing billboards was 339.33 ms), as well as their reaction time, with motorcyclists showing a significantly faster reaction time after viewing negative roadside advertisements than after viewing positive and neutral advertisements (Megías et al., 2011). Likewise, other studies have found that bicycle riders report that billboards can result in distraction from the driving task (Useche et al., 2018). There is a need to investigate the full impact of billboards on road safety, and this research needs to consider the wide range of road users and their interactions.

Finally, one of the issues that emerged from this review is the need for a better understanding of the role of the roadside advertising content. The results showed that both the appearance of billboards (graphics vs. text, text size, colours, etc.) and the content itself (taboos, negative vs positive/neutral contents, etc.) interact with driving behaviour.

5.4. Future research

As roadside advertising technology and the transport system is constantly changing, continued monitoring of roadside technologies and generation of safety data is necessary. Additionally, regulators should consider a general human-factors metric (e.g., the amount of attention required to process the roadside advertising sign using eye movements or driving performance) to regulate permitted technologies and road traffic design recommendations. Furthermore, the concept of the 'recovery zone', in which it was concluded that roadside advertising sign effects could migrate to the 8 sec of travel beyond the sign (Schieber et al., 2014) is an important concern that needs further study. There is also a need to empirically assess the most appropriate dwell time for changeable roadside advertising signs. Importantly, the full impact of roadside advertising signs on road safety requires further investigation, and this research needs to consider the wide range of road users, including motorcycle riders and pedestrians, and their interactions.

Future studies also need to consider including a wider range of participants, as most studies have involved healthy participants with perfect vision and considerable driving experience. As studies in the U.S. have found young and senior drivers are more likely to be affected by roadside advertising, focusing on these age groups is also an important area to consider for future research. Finally, qualitative research approaches also need to be considered, as this type of research can be beneficial in defining optimal research questions and identifying emergent issues.

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Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.tra.2019.01.012.

References

Adweek, 2018. These Digital Billboards from McDonald's Change Depending on How Bad the Traffic is. Retrieved from: < https://www.adweek.com/digital/these-digital-out-of-home-ads-from-mcdonalds-change-depending-on-how-bad-the-traffic-is/ > .

Ady, R.W., 1967. An investigation of the relationship between illuminated advertising signs and expressway accidents. Traffic Saf. Res. Rev. 11 (3), 9–11.

Asbridge, M., Desapriya, E., Ogilvie, R., Cartwright, J., Mehrnoush, V., Ishikawa, T., Weerasinghe, D.N., 2017. The impact of restricted driver's licenses on crash risk for older drivers: a systematic review. Transport. Res. Part A: Policy Practice 97, 137–145.

Beanland, V., Fitzharris, M., Young, K.L., Lenné, M.G., 2013. Driver inattention and driver distraction in serious casualty crashes: data from the Australian National Crash In-depth Study. Accid. Anal. Prev. 54, 99–107.

Beijer, D., Smiley, A., Eizenman, M., 2004. Observed driver glance behavior at roadside advertising signs. Transport. Res. Record: J. Transport. Res. Board 1899, 96–103.

Belyusar, D., Reimer, B., Mehler, B., Coughlin, J.F., 2016. A field study on the effects of digital billboards on glance behavior during highway driving. Accid. Anal. Prev. 88, 88–96.

Birdsall, M.S., 2008. The debate over digital billboards: can new technology inform drivers without distracting them? Inst. Transport. Eng. ITE J. 78 (4), 22–27.

Borowsky, A., Horrey, W.J., Liang, Y., Garabet, A., Simmons, L., Fisher, D.L., 2016. The effects of brief visual interruption tasks on drivers' ability to resume their visual search for a pre-cued hazard. Accid. Anal. Prev. 93, 207–216.

Cairney, P., Gunatillake, T., 2000. Roadside Advertising Signs – A Review of the Literature and Recommendations for Policy. ARRB Transport Research for RACV.

Chan, M., Madan, C.R., Singhal, A., 2016. The effects of taboo-related distraction on driving performance. Acta Psychol. 168, 20–26.

Chan, M., Singhal, A., 2013. The emotional side of cognitive distraction: implications for road safety. Accid. Anal. Prev. 50, 147–154.

Chattington, M., Reed, N., Basacik, D., Flint, A., Parkes, A., 2009. Investigating Driver Distraction: The Effects of Video and Static Advertising: A Driving Simulator Study (No. 409). Transport Research Laboratory, London.

Clark, B., Parkhurst, G., Ricci, M., 2016. Understanding the socioeconomic adoption scenarios for autonomous vehicles: A literature review. Project Report. University of the West of England, Bristol, UK. Available from: < http://eprints.uwe.ac.uk/29134 > .

CTC, Associates, L. L. C., 2012. Effects of Outdoor Advertising Displays on Driver Safety. Preliminary Invesigation requested by Caltrans Division of Design.

Decker, J.S., Stannard, S.J., McManus, B., Wittig, S.M., Sisiopiku, V.P., Stavrinos, D., 2015. The impact of billboards on driver visual behavior: a systematic literature review. Traffic Inj. Prev. 16 (3), 234–239. https://doi.org/10.1080/15389588.2014.936407.

Dia, H., 2015. Driverless cars will change the way we think of car ownership. The Conversation. Viewed 10 July 2017. < https://theconversation.com/driverless-cars-will-change-the-way-we-thinkof-car-ownership-50125 > .
Dukic, T., Ahlstrom, C., Patten, C., Kettwich, C., Kircher, K., 2013. Effects of electronic billboards on driver distraction. Traffic Inj. Prev. 14 (5), 469–476. https://doi.org/10.1080/15389588.2012.731546.
Dulebenets, M.A., Ozguven, E.E., Moses, R., 2018. The highway beautification act: towards improving efficiency of the federal outdoor advertising control program. Transport. Res. Part A: Policy Practice 110, 88–106.
Edquist, J., Horberry, T., Hosking, S., Johnston, I., 2011. Effects of advertising billboards during simulated driving. Appl. Ergon. 42 (4), 619–626. https://doi.org/10.1016/j.apergo.2010.08.013.
Farbry, J., Wochinger, K., Shafer, T., Owens, N., Nedzesky, A., 2001. Research review of potential safety effects of electronic billboards on driver attention and distraction. Washington, DC. Retrieved from < https://rosap.ntl.bts.gov/view/dot/14745 > .
Filtness, A.J., Reyner, L.A., Horne, J.A., 2012. Driver sleepiness—comparisons between young and older men during a monotonous afternoon simulated drive. Biol. Psychol. 89 (3), 580–583.
Fofanova, J., Vollrath, M., 2011. Distraction while driving: the case of older drivers. Transport. Res. Part F: Traffic Psychol. Behaviour 14 (6), 638–648.
Fuller, R., 2000. The task-capability interface model of the driving process. Recherche Transports Sécurité 66, 47–57. https://doi.org/10.1016/S0761-8980(00)90006-2.
Fuller, R., 2011. Driver control theory: from task difficulty homeostasis to risk allostasis. Handbook Traffic Psychol. 13–26. https://doi.org/10.1016/B978-0-12-381984-0.10002-5.
Global Marheting Alliance, 2018. 5 Emerging Tech Trends for the Global Marketer. Retrieved from: < https://www.the-gma.com/emerging-tech-trends > .
Hasan, A., 2015. Hazardous attraction: external-to-vehicle distraction caused by billboard advertisements in Lahore. Global Med. J.: Pakistan Ed. 8 (2).
Hawkins Jr., H.G., Kuo, P., Lord, D., 2012. Statistical Analysis of the Relationship Between On-premise Digital Signage and Traffic Safety. Signage Foundation, Inc. & Texas Engineering Extension Service, Washington, DC.
Herrstedt, L., Greibe, P., Andersson, P.K., 2013. Driver attention is captured by roadside advertising signs. In: 16th International Conference Road Safety on Four Continents. Beijing, China.
Herrstedt, L., Greibe, P., Andersson, P., La Cour Lund, B., 2017. Do LED-advertising signs affect driver attention? In: Paper presented at the 5th International Driver Distraction and Innatention (DDI) Conference, Paris, France.
Horberry, T., Edquist, J., 2008. Distractions outside the vehicle. In: Regan, M.A., Lee, J.D., Young, K. (Eds.), Driver Distraction: Theory, Effects, and Mitigation. CRC Press, Taylor & Francis Group, Boca Raton, pp. 215–227.
Horberry, T., Regan, M., Edquist, J., 2013. Using road safety evidence and 'safety in design' approaches to regulate driver distraction from roadside advertising. In: Regan, M., Lee, J.D., Victor, T.W. (Eds.), Driver Distraction and Inattention. Ashgate Press, Farnham, UK.
Islam, M.M., 2015. A Comprehensive Assessment of Possible Links Between Digital Advertising Billboards and Traffic Safety. The University of Alabama at Birmingham.
Izadpanah, P., Omrani, R., Koo, S., Hadayeghi, A., 2014. Effect of static electronic advertising signs on road safety: an experimental case study. J. Orthop. Trauma 28, S33–S36. https://doi.org/10.1097/BOT.0000000000000101.
Jenkins, S., 2016. Recommendations for the Maximum Luminance of Digital Advertising Signs. Department of Transport and Main Roads, Queensland.
Klauer, S.G., Dingus, T.A., Neale, V.L., Sudweeks, J.D., Ramsey, D.J., 2006. The Impact of Driver Inattention on Near-Crash/Crash Risk: An Analysis Using the 100-Car Naturalistic Driving Study Data (No. HS-810 594).
Kumparak, G., 2018, August 15. Grabb-It wants to turn your car's window into a trippy video billboard. November 18, 2018. < https://techcrunch.com/2018/08/15/grabb-it-wants-to-turn-your-cars-window-into-a-trippy-video-billboard/ > .
Kyriakidis, M., Happee, R., de Winter, J.C., 2015. Public opinion on automated driving: results of an international questionnaire among 5000 respondents. Transport. Res. Part F: Traffic Psychol. Behaviour 32, 127–140.
Larue, G.S., Wullems, C., Sheldrake, M., Rakotonirainy, A., 2018. Validation of a driving simulator study on driver behavior at passive rail level crossings. Hum. Factors 60 (6), 743–754.
Lee, S.E., Olsen, E.C., DeHart, M.C., 2004. Driving performance in the presence and absence of billboards. Blacksburg, Virginia. < https://trid.trb.org/view/811075 > .
Marciano, H., Setter, P.E., 2017. The effect of billboard design specifications on driving: a pilot study. Accid. Anal. Prev. 104, 174–184. https://doi.org/10.1016/j.aap.2017.04.024.
Megías, A., Maldonado, A., Catena, A., Di Stasi, L.L., Serrano, J., Cándido, A., 2011. Modulation of attention and urgent decisions by affect-laden roadside advertisement in risky driving scenarios. Saf. Sci. 49 (10), 1388–1393. https://doi.org/10.1016/j.ssci.2011.06.001.
Metz, B., Krüger, H.P., 2014. Do supplementary signs distract the driver? Transport. Res. Part F: Traffic Psychol. Behaviour 23, 1–14.
Meuleners, L., Fraser, M., 2015. A validation study of driving errors using a driving simulator. Transport. Res. Part F: Traffic Psychol. Behaviour 29, 14–21.
Missokefalou, E., Eliou, N., 2012. Recording and evaluation procedure of drivers' distraction: the case of thessaloniki ring road. Proc.-Soc. Behav. Sci. 48, 3159–3169. https://doi.org/10.1016/j.sbspro.2012.06.1282.
Misokefalou, E., Papadimitriou, F., Kopelias, P., Eliou, N., 2016. Evaluating driver distraction factors in urban motorways. A naturalistic study conducted in Attica Tollway, Greece. Transport. Res. Proc. 15, 771–782.
Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G., Prisma Group, 2009. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med. 6 (7), e1000097.
Molino, J.A., Wachtel, J., Farbry, J.E., Hermosillo, M.B., Granda, T.M., 2009. The Effects of Commercial Electronic Variable Message Signs (CEVMS) on Driver Attention and Distraction: An Update (No. FHWA-HRT-09-018). Turner-Fairbank Highway Research Center.
Olejniczak-Serowiec, A., Maliszewski, N., Ziętek, K., 2017. Social attitudes towards roadside advertising. In: MATEC Web of Conferences, vol. 122. EDP Sciences, pp. 03006. https://doi.org/10.1051/matecconf/201712203006.
OMA, 2013. OMA Response to Austroads Research Report – Impact of roadside advertising on road safety. Retrieved from Outdoor Media Association.
Oviedo-Trespalacios, O., 2018. Getting away with texting: behavioural adaptation of drivers engaging in visual-manual tasks while driving. Transport. Res. Part A: Policy Practice 116, 112–121.
Oviedo-Trespalacios, O., Haque, M.M., King, M., Demmel, S., 2018. Driving behaviour while self-regulating mobile phone interactions: a human-machine system approach. Accid. Anal. Prev. 118, 253–262.
Oviedo-Trespalacios, O., Haque, M.M., King, M., Washington, S., 2017a. Effects of road infrastructure and traffic complexity in speed adaptation behaviour of distracted drivers. Accid. Anal. Prev. 101, 67–77.
Oviedo-Trespalacios, O., Haque, M.M., King, M., Washington, S., 2017b. Self-regulation of driving speed among distracted drivers: an application of driver behavioral adaptation theory. Traffic Inj. Prev. 18 (6), 599–605.
Oviedo-Trespalacios, O., Haque, M.M., King, M., Washington, S., 2016. Understanding the impacts of mobile phone distraction on driving performance: a systematic review. Transport. Res. Part C: Emerging Technol. 72, 360–380.
Perez, W., Bertola, M., Kennedy, J., Molino, J., 2012. Driver Visual Behavior in the Presence of Commercial Electronic Variable Message Signs (CEVMS). Federal Highway Administration Final Report.
Rasdorf, W., Machado, P., Hummer, J.E., Kaber, D., Zahabi, M., Lau, M., Pankok, C., 2017. Driver accuracy in identifying food and attraction targets on business logo signs: impacts of driver age, number of panels, logo familiarity, and logo format. Transport. Res. Rec.: J. Transport. Res. Board 2624, 9–18.
Regan, M.A., Hallett, C., Gordon, C.P., 2011. Driver distraction and driver inattention: definition, relationship and taxonomy. Accid. Anal. Prev. 43 (5), 1771–1781.
Rhodes, N., Pivik, K., Sutton, M., 2015. Risky driving among young male drivers: the effects of mood and passengers. Transport. Res. Part F: Traffic Psychol. Behaviour 28, 65–76.
Roberts, P., 2013. Designing evidence-based guidelines for the safe use of digital billboard installations: experience and results from Australia. In: 16th International

Conference Road Safety on Four Continents. Beijing, China (RS4C 2013). 15–17 May 2013.
Roberts, P., Boddington, K., Rodwell, L., Austroads, 2013. Impact of Roadside Advertising on Road Safety. < https://www.onlinepublications.austroads.com.au/items/AP-R420-13 > .
Rodd, H., 2017. Roadside Advertisements: Effects of Valence and Arousal on Driver Performance. Doctoral dissertation. The University of Guelph.
Rothengatter, T., 1997. Psychological aspects of road user behaviour. Appl. Psychol. 46 (3), 223–234. https://doi.org/10.1080/026999497378331.
Schieber, F., Limrick, K., McCall, R., Beck, A., 2014. Evaluation of the visual demands of digital billboards using a hybrid driving simulator. In: Proceedings of the Human Factors and Ergonomics Society Annual Meeting, vol. 58, no. 1. Sage Publications, Sage CA: Los Angeles, pp. 2214–2218.
Scott-Parker, B., Goode, N., Salmon, P., 2015. The driver, the road, the rules… and the rest? A systems-based approach to young driver road safety. Accid. Anal. Prev. 74, 297–305.
Sharpe, S.C., 2011. Between beauty and beer signs: why digital billboards violate the letter and spirit of the highway beautification act of 1965. Rutgers L. Rev. 64, 515.
Sisiopiku, V.P., Stavrinos, D., Sullivan, A., Islam, M.M., Wittig, S.M., Haleem, K., et al., 2015. Digital Advertising Billboards and Driver Distraction. National Center for Transportation Systems Productivity and Management, Atlanta, United States of America.
Smiley, A., Persaud, B., Bahar, G., Mollett, C., Lyon, C., Smahel, T., Kelman, W., 2005. Traffic safety evaluation of video advertising signs. Transport. Res. Rec.: J. Transport. Res. Board 1937, 105–112.
Smith, B.W., 2016. Automated driving policy. In: Road Vehicle Automation. Springer, Cham, pp. 53–58.
Staffeld, P.R., 1953. Accidents related to access points and advertising signs in study. Traffic Quarterly 7 (1).
Stavrinos, D., Mosley, P.R., Wittig, S.M., Johnson, H.D., Decker, J.S., Sisiopiku, V.P., Welburn, S.C., 2016. Visual behavior differences in drivers across the lifespan: a digital billboard simulator study. Transport. Res. Part F: Traffic Psychol. Behaviour 41, 19–28. https://doi.org/10.1016/j.trf.2016.06.001.
Svensson, Å., Hydén, C., 2006. Estimating the severity of safety related behaviour. Accid. Anal. Prev. 38 (2), 379–385.
Targosiński, T., 2017. Preliminary simulation research of driver behaviour in response to outdoor advertisements. In: MATEC Web of Conferences, 122, 03009. < https://doi.org/10.1051/matecconf/201712203009 > .
Tarnowski, Adam, Olejniczak-Serowiec, Anna, Marszalec, Agnieszka, 2017. Roadside advertising and the distraction of driver's attention. In: MATEC Web of Conferences, 122, 03010. https://doi.org/10.1051/matecconf/201712203010 > .
Topolšek, D., Areh, I., Cvahte, T., 2016. Examination of driver detection of roadside traffic signs and advertisements using eye tracking. Transport. Res. Part F: Traffic Psychol. Behaviour 43, 212–224. https://doi.org/10.1016/j.trf.2016.10.002.
Useche, S., Montoro, L., Alonso, F., Oviedo-Trespalacios, O., 2018. Infrastructural and human factors affecting safety outcomes of cyclists. Sustainability 10 (2), 299. https://doi.org/10.3390/su10020299.
Wallace, B., 2003. Driver distraction by advertising: genuine risk or urban myth? Municipal Eng. 156 (3), 185–190. https://doi.org/10.1680/muen.2003.156.3.185.
Wilson, R.T., Casper, J., 2016. The role of location and visual saliency in capturing attention to outdoor advertising: how location attributes increase the likelihood for a driver to notice a billboard ad. J. Advertising Res. 56 (3), 259–273.
World Health Organization (WHO), 2011. Mobile Phone Use: A Global Problem of Driver Distraction. World Health organization, Geneva, Switzerland.
World Health Organization (WHO), 2015. Global Status Report on Road Safety. Geneva, Switzerland: World Health Organization. < http://www.who.int/violence_injury_prevention/road_safety_status/2015/en/ > .
Yan, X., Abdel-Aty, M., Radwan, E., Wang, X., Chilakapati, P., 2008. Validating a driving simulator using surrogate safety measures. Accid. Anal. Prev. 40 (1), 274–288.
Yannis, G., Papadimitriou, E., Papantoniou, P., Voulgari, C., 2013. A statistical analysis of the impact of advertising signs on road safety. Int. J. Injury Control Safety Promotion 20 (2), 111–120. https://doi.org/10.1080/17457300.2012.686042.
Yellappan, K., Ghani, Y., Musa, M., Siam, M.F., Tan, C.Y., 2016. Exposure and Perception on Distraction Towards Roadside Digital Advertisements. Malaysian Institute of Road Safety Research, Malaysia. https://www.miros.gov.my/1/publications.php?id_page=19&id_event=469.
Young, M.S., Mahfoud, J.M., 2007. Driven to distraction: Determining the effects of roadside advertising on driver attention. Final report of a Study Funded by The Rees Jeffreys Road Fund. Brunel University of West London, Uxbridge, Middlesex.
Young, K.L., Stephens, A.N., Logan, D.B., Lenné, M.G., 2017. Investigating the impact of static roadside advertising on drivers' situation awareness. Appl. Ergon. 60, 136–145.
Zahabi, M., Machado, P., Lau, M.Y., Deng, Y., Pankok Jr, C., Hummer, J., et al., 2017. Driver performance and attention allocation in use of logo signs on freeway exit ramps. Appl. Ergon. 65, 70–80.
Zalesinska, M., 2018. The impact of the luminance, size and location of LED billboards on drivers' visual performance—laboratory tests. Accid. Anal. Prev. 117, 439–448.
Zhang, L., Zhang, J., Liu, Y., Guo, J., 2017. The impact of over-bright highway billboards on driving behavior. In: Paper Presented at the 3rd International Conference on Vehicle Technology and Intelligent Transport Systems, Porto, Portugal.

References Reviewed

Ahlstrom, C., 2013. Response to letter to the editor: electronic billboards and driver distraction. Traffic Inj. Prev. 14 (5).
Aplin, G., 2013. Report on the inquiry into road user distraction/Joint Standing Committee on Road Safety (Staysafe), Parliament of New South Wales. [Sydney, N. S.W].
Beijer, D., Smiley, A., Eizenman, M. Observed driver glance behavior at roadside advertising signs. Transport. Res. Record: J. Transport. Res. Board.
Belyusar, D., Reimer, B., Mehler, B., Coughlin, J.F., 2016. A field study on the effects of digital billboards on glance behavior during highway driving. Accid. Anal. Prev. 88, 88–96.
Bendak, S., Al-Saleh, K., 2010. The role of roadside advertising signs in distracting drivers. Int. J. Ind. Ergon. 40 (3), 233–236.
Bichajlo, L., 2017. Visual Perception by Drivers of the Advertisements Located at Selected Major Routes. Paper presented at IOP Conference Series: Materials Science and Engineering, Dubai, United Arab Emirates.
Birdsall, M.S., 2008. The debate over digital billboards: can new technology inform Drivers Without Distracting Them? Inst. Transp. Eng. ITE J. 78 (4), 22–27.
Cairney, Gunatillake, 2000. Roadside advertising signs – a review of the literature and recommendations for policy.
Chan, M., Singhal, A., 2013. The emotional side of cognitive distraction: implications for road safety. Accid. Anal. Prev. 50, 147–154.
Chan, M., Madan, C.R., Singhal, A., 2016. The effects of taboo-related distraction on driving performance. Acta Psychol. 168, 20–26.
Chattington, M., Reed, N., Basacik, D., Flint, A., Parkes, A., Trl., 2009. Investigating driver distraction: the effects of video and static advertising: a driving simulator study.
Crundall, D., Van Loon, E., Underwood, G., 2006. Attraction and distraction of attention with roadside advertisements. Accid. Anal. Prev. 38 (4), 671–677.
Ctc, Associates, L.L.C., 2012. Effects of Outdoor Advertising Displays on Driver Safety. Preliminary Investigation requested by Caltrans Division of Research and Innovation.
Daluge et al., 2011. Outdoor Advertising Control Practices in Australia, Europe and Japan. International Technoloigcal Scanning Program Report no. FHWA-PL-10-031.
Decker, J.S., Stannard, S.J., McManus, B., Wittig, S.M., Sisiopiku, V.P., Stavrinos, D., 2015. The impact of billboards on driver visual behavior: a systematic literature review. Traffic Inj. Prev. 16 (3), 234–239.
Divekar, G., Pradhan, A., Pollatsek, A., Fisher, D., 2012. Effect of external distractions: behavior and vehicle control of novice and experienced drivers evaluated. Transp. Res. Record: J. Transp. Res. Board 2321, 15–22.
Dukic, T., Ahlstrom, C., Patten, C., Kettwich, C., Kircher, K., 2012. Effects of electronic billboards on driver distraction. Traffic Inj. Prev. 14 (5), 469–476.

Dunthorne, A., 1982. The Luminance of Traffic and Advertising Signs.
Edquist, J., 2009. The Effects of Visual Clutter on Driving Performance. Thesis Monash University, Department of Psychology.
Edquist, J., Horberry, T., Hosking, S., Johnston, I., 2011. Advertising billboards impair change detection in road scenes. Paper presented at 2011 Australasian Road Safety Research, Education & Policing Conference, Perth, Western Australia.
Edquist, J., Horberry, T., Hosking, S., Johnston, I., 2011. Effects of advertising billboards during simulated driving. Appl. Ergon. 42 (4), 619–626.
Farbry, J., Wochinger, K., Shafer, T., Owens, N., Nedzesky, A., 2001. Research review of potential safety effects of electronic billboards on driver attention and distraction. Federal Highway Administration Final Report.
Fisher, D.L., Pollatsek, A., Horrey, W.J., 2011. Eye Behaviors: How Driving Simulators can Expand their Role in Science and Engineering. In: Handbook of Driving Simulation for Engineering, Medicine, and Psychology, pp. 18–22.
Friswell, R., Vecellio, E., Grzebieta, R., Hatfield, J., Mooren, L., Cleaver, M., De Roos, M., 2011. Are roadside electronic static displays a threat to safety? Paper presented at the Australasian Road Safety Research, Policing and Education Conference. < http://acrs.org.au/publications/conference-papers/database/ > .
Friswell, R., Vecellio, E., Grzebieta, R., Hatfield, J., Mooren, L., Cleaver, M., DeRoos, M., 2011. Assessing the empirical evidence on the safety impact of electronic static displays. Paper presented at the Australasian College of Road Safety Conference. < https://trid.trb.org/view/1149332 > .
Frost, G., 2011. Examining the effect of advertisements on the perception of a road scene: a comparison of change blindness in drivers and non-drivers. Thesis University of Salford.
Garrison, T.M., Williams, C.C., 2013. Impact of relevance and distraction on driving performance and visual attention in a simulated driving environment. Appl. Cognitive Psychol. 27, 396–405.
Garrison, T., 2011. Allocating Visual Attention: How Relevance to Driving Impacts Attention When Drivers Are Distracted. Paper presented at the Sixth International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design, Olympic Valley — Lake Tahoe, California.
Garvey, P.M., Pietrucha, M.T., 2005. Electronic message center research review: United States Sign Council Foundation Final Report.
Gregoriades, A., Florides, C., Lesta, V.P., Pampaka, M., IEEE, 2013. Driver Behaviour Analysis Through Simulation. Paper presented at the 2013 IEEE International Conference on Systems, Man, and Cybernetics, Manchester, United Kingdom.
Guerra, R., Camargo Braga, M., 1998. Guidelines for the display of advertising signs within the road reserve in Brasil. In: Transport Policy, vol. 5, pp. 127–137.
Hasan, A., 2015. Hazardous attraction: external-to-vehicle distraction caused by billboard advertisements in Lahore. Global Med. J.: Pakistan Ed. 8 (2).
Hawkins Jr., H.G., 2012. Statistical analysis of the relationship between on-premise digital signage and traffic safety. Signage Foundation, Inc. & Texas Engineering Extension Service.
Henson, S., 2009. Digital Billboard Safety amongst Motorists in Los Angeles.
Herrstedt, L., Greibe, P., Andersson, P.K., 2013. Driver attention is captured by roadside advertising signs. Paper presented at the 16th International Conference Road Safety on Four Continents. Beijing, China (RS4C 2013). 15–17 May 2013.
Herrstedt, L., Greibe, P., Andersson, P., la Cour Lund, B., 2017. Do LED-advertising signs affect driver attention? Paper presented at the Proceedings of 5th International DDI Conference, Paris, France.
Herrstedt, L., Greibe, P., Andersson, P., Chalmers University of Technology, S.V., Traffic Safety, C., 2013. Roadside advertising affects driver attention and road safety. Paper presented at the 3rd International Conference on Driver Distraction and Inattention, Gothenburg, Sweden.
Horberry, T., Edquist, J., 2008. Distractions outside the Vehicle. In Driver Distraction: Theory, Effects, and Mitigation.
Hughes, P.K., Cole, B.L., 1986. What attracts attention when driving? Ergonomics 29 (3), 377–391.
Islam, M., 2015. A comprehensive assessment of possible links between digital advertising billboards and traffic safety. Thesis. The University of Alabama.
Izadpanah, P., Omrani, R., Koo, S., Hadayeghi, Al, 2014. Effect of static electronic advertising signs on road safety: an experimental case study. J. Orthop. Trauma 28 (6), 33–36.
Jenkins, S., 2016. Recommendations for the Maximum Luminance of Digital Advertising Signs.
Kocián, K., Kocourek, J., Nouzovský, L., Radová, Z., Svatý, Z., 2017. Impact of roadside advertising on road safety in the Czech Republic. Paper presented at the Smart City Symposium Prague (SCSP), 2017.
Lee, S.E., McElheny, M.J., Gibbons, R., 2007. Driving performance and digital billboards.
Lee, S.E., Olsen, E.C., DeHart, M.C., 2004. Driving performance in the presence and absence of billboards.
Luginbuhl, C., Scowen, P., Polakis, J., Polakis, T., 2010. Digital LED Billboard Recommendations: How Bright is Bright Enough?
Marciano, H., 2017. The effect of billboard design specifications on driving: a pilot study. Accid. Anal. Prev. 104, 174–184.
Marciano, H., Yeshurun, Y., 2012. Perceptual load in central and peripheral regions and its effects on driving performance: advertizing billboards. Work 41 (1), 3181–3188.
Marsh, B., Lautner, B., Fournier, L., Klang, J., Anelli, P., Kang, W., Brumec, U., Cota, K., 2016. The Role of Road Engineering in Combatting Driver Distraction and Fatigue Road Safety Risks.
Megías, A., Maldonado, A., Catena, A., Di Stasi, L.L., Serrano, J., Cándido, A., 2011. Modulation of attention and urgent decisions by affect-laden roadside advertisement in risky driving scenarios. Saf. Sci. 49 (10), 1388–1393.
Metz, B., Krüger, H.P., 2014. Do supplementary signs distract the driver? Transp. Res. Part F: Traffic Psychol. Behaviour 23, 1–14.
Milloy, S.L., Caird, J.K., 2011. External Driver Distractions: the Effects of Video Billboards and Wind Farms on Driving Performance. Handbook of Driving Simulation for Engineering, Medicine, and Psychology, 16-1.
Misokefalou, E., Papadimitriou, F., Kopelias, P., Eliou, N., 2016. Evaluating Driver Distraction Factors in Urban Motorways. A Naturalistic Study Conducted in Attica Tollway, Greece. 2016 International Symposium on Enhancing Highway Performance, Berlin, Germany.
Missokefalou, E., Eliou, N., 2012. Recording and evaluation procedure of drivers' distraction: the case of Thessaloniki Ring Road. In: Papaioannou, P. (Ed.), Transport Research Arena 2012 Athens, Greece.
Molino, J., Wachtel, J., Farbry, J., Hermosillo, M., Granda, T., 2009. The Effects of Commercial Electronic Variable Message Signs (CEVMS) on Driver Attention and Distraction: An Update.
Mrgole, A.L., 2017. The influence on road safety due to driver distraction from outdoor advertising: case study. Am. Sci. Res. J. Eng., Technol., Sci. (ASRJETS) 35 (1), 42–49.
Olejniczak-Serowiec, A., Maliszewski, N., Ziętek, K., 2017. Social attitudes towards roadside advertising. Paper presented at the MATEC Web of Conferences, Hualian, Taiwan.
OMA, 2013. OMA Response to Austroads Research Report – Impact of roadside advertising on road safety. Retrieved from Outdoor Media Association.
Perez, W., Bertola, M., Kennedy, J., Molino, J., 2012. Driver Visual Behavior in the Presence of Commercial Electronic Variable Message Signs (CEVMS).
Radun, I., Ahlstrom, C., 2013. Letter to the editor: electronic billboards and driver distraction. Traffic Inj. Prev. 14 (5), 554–555.
Rasdorf, W., Machado, P., Hummer, J.E., Kaber, D., Zahabi, M., Lau, M., Pankok, C., 2017. Driver accuracy in identifying food and attraction targets on business logo signs: impacts of driver age, number of panels, logo familiarity, and logo format. Transp. Res. Rec.: J. Transp. Res. Board 2624, 9–18.
Rempel, G., Montufar, J., Dewar, R., Forbes, G., 2014. Guiding Principles for Developing Digital and Projected Advertising Display Regulations. Paper presented at the Conference and Exhibition of the Transportation Association of Canada, Montreal, Canada.
Roberts, 2016. Impact of roadside advertising on road safety – AP-R420-13 Literature review update. Report for Department of Transport and Main Roads (Queensland).
Roberts, P., Boddington, K., Rodwell, L., Austroads, 2013. Impact of roadside advertising on road safety. Retrieved from < https://www.onlinepublications.austroads.com.au/items/AP-R420-13 > .
Roberts, P., 2013. Designing evidence-based guidelines for the safe use of digital billboard installations: experience and results from Australia. Paper presented at the 16th International Conference Road safety on four continents.
Rodd, H., 2017. Roadside Advertisements: Effects of Valence and Arousal on Driver Performance. Doctoral dissertation The University of Guelph.
Samsa, C., 2015. Digital billboards ‘down under’. Are they distracting to drivers and can industry and regulators work together for a successful road safety outcome?

Paper presented at the 1st Australasian Road Safety Conference, Gold Coast, Australia.
Schieber, F., Limrick, K., McCall, R., Beck, A., 2014. Evaluation of the Visual Demands of Digital Billboards Using a Hybrid Driving Simulator. Proceedings of the Human Factors and Ergonomics Society 58th Annual Meeting, Sandiego, California.
Sisiopiku, V.P., Stavrinos, D., Sullivan, A., Islam, M.M., Wittig, S.M., Haleem, K., Alluri, P., 2015. Digital Advertising Billboards and Driver Distraction.
Sisiopiku, V.P., Stavrinos, D., Sullivan, A., Islam, M.M., Wittig, S.M., Haleem, K., Gan, A. and Alluri, P. 2015. Digital Advertising Billboards and Driver Distraction.
Smiley, A., Persaud, B., Bahar, G., Mollett, C., Lyon, C., Smahel, T., Kelman, W., 2005. Traffic safety evaluation of video advertising signs. Transp. Res. Rec.: J. Transp. Res. Board 1937, 105–112.
Stavrinos, D., Mosley, P.R., Wittig, S.M., Johnson, H.D., Decker, J.S., Sisiopiku, V.P., Welburn, S.C., 2016. Visual behavior differences in drivers across the lifespan: a digital billboard simulator study. Transp. Res. Part F: Traffic Psychol. Behaviour 41, 19–28.
Tantala and Tantala, 2007. A study of the relationship between digital billboards and traffic safety in Cuyahogo County, Ohio. Tantala Associates Final Report.
Targosiński, T., 2017. Preliminary simulation research of driver behaviour in response to outdoor advertisements. Paper presented at the MATEC Web of Conferences, Hualien, Taiwan.
Tarnowski, A., Olejniczak-Serowiec, A., Marszalec, A., 2017. Roadside advertising and the distraction of driver's attention. Paper presented at the MATEC Web of Conferences, Hualian, Taiwan.
The Parliament of Victoria, 2006. Inquiry into Driver Distraction: Report of the Road Safety Committee on the Inquiry into Driver Distraction.
Topolšek, D., Areh, I., Cvahte, T., 2016. Examination of driver detection of roadside traffic signs and advertisements using eye tracking. Transp. Res. Part F: Traffic Psychol. Behaviour 43, 212–224.
Wachtel, J., 2015. A peer reviewed critique of the federal highway administrative report titled "Driver Visual Behaviour in the Presence of CEVMS".
Wachtel, J., 2011. Digital billboards, distracted drivers. Planning 77 (3), 25–27.
Wallace, B., 2003. Driver distraction by advertising: genuine risk or urban myth? In: Proceedings of the Institution of Civil Engineers-Municipal Engineer, vol. 156, no. 3. Thomas Telford Ltd., pp. 185–190.
Watchtel, J., 2014. Report on Digital Sign Brightness. The Veridian Group Final Report.
Wilson, R.T., Casper, J., 2016. The role of location and visual saliency in capturing attention to outdoor advertising: how location attributes increase the likelihood for a driver to notice a billboard ad. J. Advertising Res. 56 (3), 259–273.
Yannis, G., Papadimitriou, E., Papantoniou, P., Voulgari, C., 2013. A statistical analysis of the impact of advertising signs on road safety. Int. J. Injury Control Saf. Promotion 20 (2), 111–120.
Yellappan, K., Ghani, Y., Musa, M., Siam, M.F., Tan, C.Y., Malaysian Institute of Road Safety, R., 2016. Exposure and perception on distraction towards roadside digital advertisements.
Young, K.L., Stephens, A.N., Logan, D.B., Lenné, M.G., 2017. Investigating the impact of static roadside advertising on drivers' situation awareness. Appl. Ergon. 60, 136–145.
Young, M.S., Mahfoud, J.M., 2007. Driven to distraction: the effects of roadside advertising on driver attention. Final Report of a study funded by the Rees Jeffreys Road Fund.
Young, M.S., Mahfoud, J.M., Stanton, N.A., Salmon, P.M., Jenkins, D.P., Walker, G.H., 2009. Conflicts of interest: the implications of roadside advertising for driver attention. Transp. Res. Part F: Psychol. Behav. 12 (5), 381–388.
Zahabi, M., Machado, P., Lau, M.Y., Deng, Y., Pankok Jr, C., Hummer, J., et al., 2017. Driver performance and attention allocation in use of logo signs on freeway exit ramps. Appl. Ergon. 65, 70–80.
Zalesinska, M., 2018. The impact of the luminance, size and location of LED billboards on drivers' visual performance—laboratory tests. Accid. Anal. Prev.
Ziakopoulos, A., Theofilatos, A., Papadimitriou, E., Yannis, G., 2017. Driver distraction without presence of secondary tasks: Inattention, cognitive overload and factors outside the vehicle–an overview. Paper presented at the Road Safety & Simulation International Conference 2017.

LOCATION PLAN

Scale 1:1250@A3 0m 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m

SITE PLAN

Scale 1:500@A3 0m 10m 20m 30m 40m

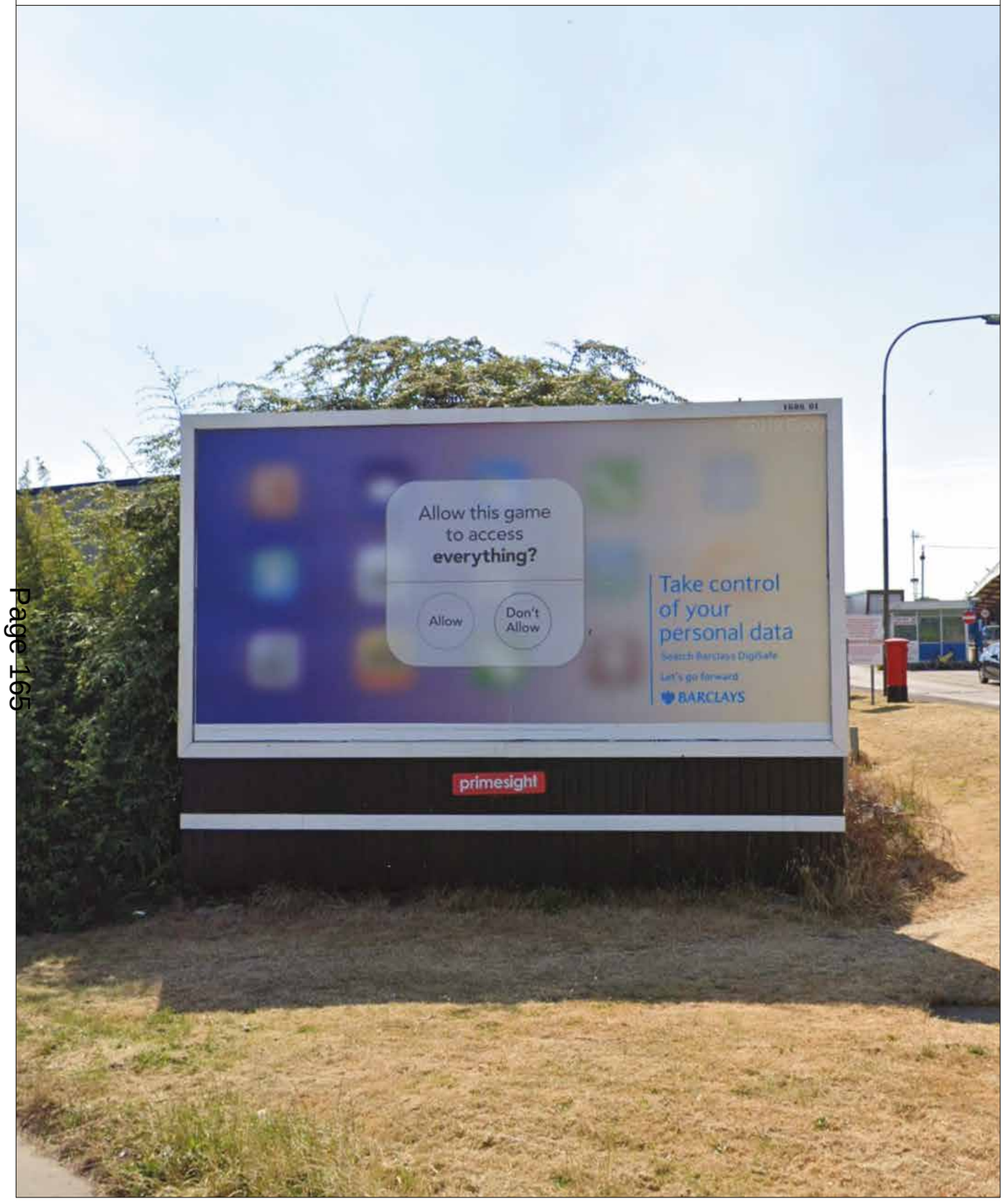
Notes:

Upgrade of 1no. 48-sheet advertisement hoarding to digital LED display

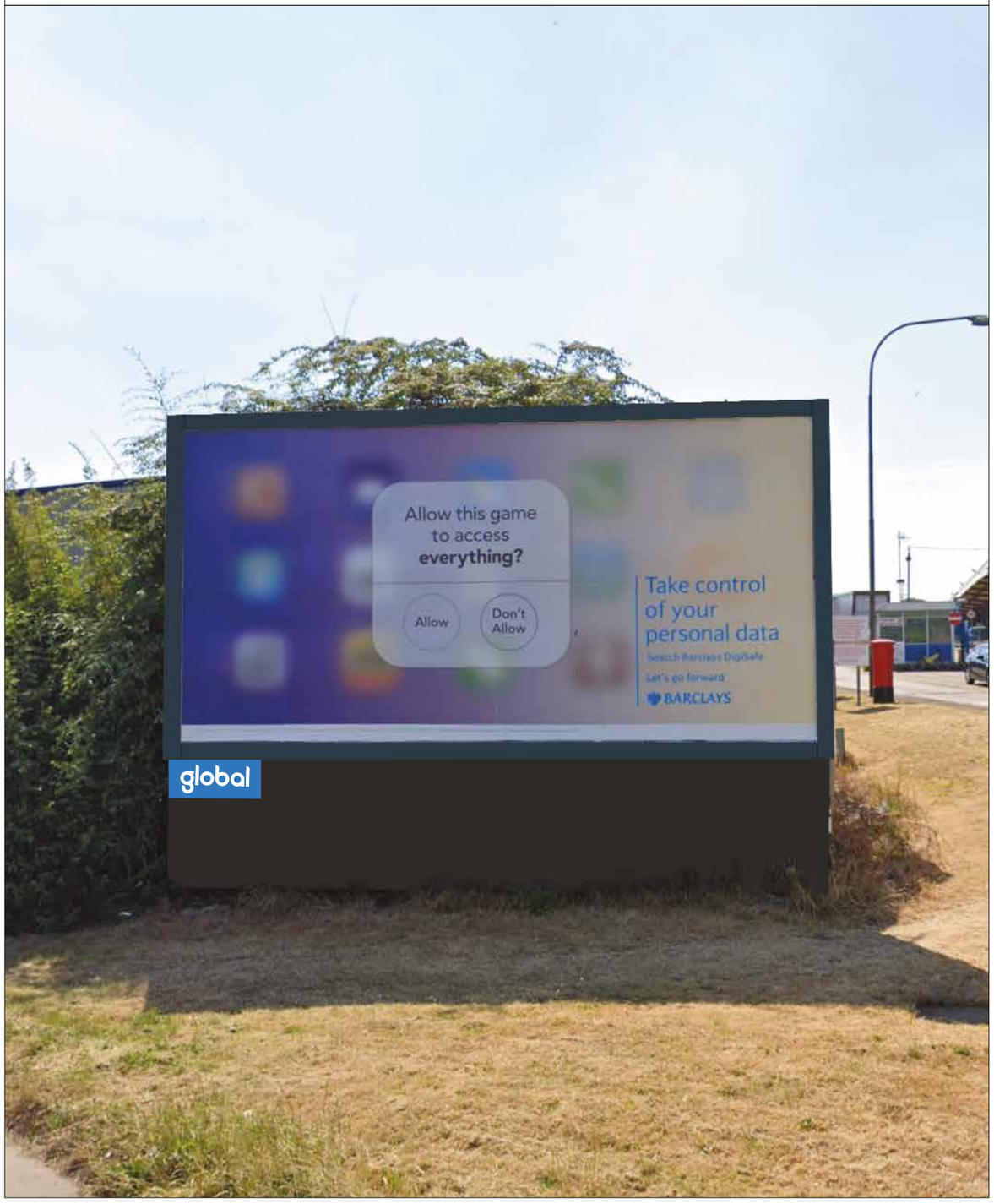
Site Location

Site Address:	Drawing Title:	Date:	Scale:	Dwg. No:	Rev:
Albert Rd, Roundabout, St. Philips	Location & Site Plans	1st June 2020	Scale as shown when printed at A3	BST-009/001	Rev 1

EXISTING VIEW



PROPOSED VIEW



Site Address:	Drawing Title:	Date:	Scale:	Dwg. No:	Rev:
Albert Rd, Roundabout, St. Philips	Existing & Proposed Views	16th January 2020	Not to scale, indicative only	BST-009/004	_ _