

APPENDIX 12.4

TECHNICAL VISUALISATIONS BY VUCITY



Cambridge North

Brookgate Land Limited

WUCITY

PROJECT

Cambridge North

CLIENT

Brookgate Land Limited

STAGE

ZTV + AVR Document

ARCHITECTS MODEL REF

“220516-VU CITY MODEL ISSUE”

09 June 2022



Outline Application **S8**



Outline Application **S9**



Outline Application **S11 - S21**



Detailed Application



Consented



Under construction



Completed post 2017



**St Johns Innovation Park
20/03523/FUL**

**Marleigh Dev Phase2
21/02450/REM**





This document will supplement the landscape and visual impact assessment being carried out by Bidwells. It contains a Zone of Theoretical Visibility (ZTV) study and an Actual Visual Representation (AVR) study. The ZTV study was achieved using the Detail/Outline application as the subject site and the VU.CITY model for context. (Methodology statement in seperate PDF). The AVR study was accomplished using photographs and survey data captured by chartered surveyors MSA. This data was then combined with the Detail/Outline application model, supplied by the masterplanners, ACME.



Marleigh Dev Phase2
21/02450/REM

To date, VU.CITY have modelled approximately 89 sq km of Cambridge using aerial photography from 2017. We also routinely check public planning portals to add consented schemes and new builds and have modelled 56 consents.

Consented  Under construction  Completed post 2017 

Outline Application **S8** 
Outline Application **S9** 
Outline Application **S11 - S21** 
Detailed Application 

Guide to reading this AVR study

(Table 1) Surveying and photography commenced on 2 March 2022 (Winter) and ended 14 April (Spring).

Due to extenuating circumstances, (Storms Eunice and Franklin and positive covid test results at MSA) some of the viewpoints were photographed without survey data. Where this is the case, MSA have revisited the viewpoints to capture additional photographs and accompanying survey data.

In these scenarios, type 3 winter photographs and type 4 spring photographs are presented for comparison, (Scenario 3)

Scenario 1
Winter survey and type 4 photography captured

View Map



Winter Photo + Survey report



Existing photo Type 4



AVR Mix Trees 1 Year



AVR Mix Trees 15 Years



Scenario 2
Verified view not required, type 3 photo and VU.CITY (type 2) render used

View Map



Existing photo Type 3



Scenario 3
Winter type 3 photo captured without survey info. Spring photo and survey captured

View Map



Winter Photo report



Existing photo Type 3



AVR Mix



Spring Photo + Survey report



Existing photo Type 4



AVR Mix Trees 1 Year



AVR Mix Trees 15 Years



View Number	View Name	Date Taken	Type
1	LVA - Footbridge over A14	30 March 2021	3
2	LVA - Bramble LNR	07 March 2022	4
3	HER - Castle Mound	19 November 2021	3
4	LVA - Cowley Road	02 March 2022	4
5	LVA/HER - Ditton Meadows	14 March 2022	3
5	LVA/HER - Ditton Meadows	6 April 2022	4
6	HER - Green End	6 April 2022	4
7a	LVA/HER - Footpath 162/1 at Fen Road	30 March 2021	3
7b	LVA/HER - Footpath 162/1 at Baits Bite Lock	02 June 2021	3
7c	HER - Hamcamlow Way at Biggin Abbey	14 March 2022	3
7c	HER - Hamcamlow Way at Biggin Abbey	5 April 2022	4
8	LVA/HER - Footpath 85/6 Fen Ditton	14 March 2022	3
8	LVA/HER - Footpath 85/6 Fen Ditton	5 April 2022	4
9	LVA/HER - Field Lane byway	14 March 2022	3
9	LVA/HER - Field Lane byway	06 April 2022	4
10	LVA/HER - Low Fen Drove way - west	14 March 2022	3
10	LVA/HER - Low Fen Drove way - west	04 April 2022	4
11	HER - Low Fen Drove way - east	30 March 2021	3
12	HER - Low Fen Drove way - south	26 July 2021	3
13	LVA - Byway 162/3	30 March 2021	3
14	LVA - Guided busway	7 April 2022	4
15	LVA/HER - Ditton Meadows	14 March 2022	3
15	LVA/HER - Ditton Meadows	06 April 2022	4
16	LVA/HER - Stourbridge Common	14 March 2022	3
16	LVA/HER - Stourbridge Common	06 April 2022	4
17	HER - East of Milton Conservation Area	7 February 2022	3
18	HER - St Peter's Church, Horningsea	03 March 2022	3
18	HER - St Peter's Church, Horningsea	04 April 2022	4
19	HER - Horningsea Conservation Area, Priory Road	03 March 2022	3
19	HER - Horningsea Conservation Area, Priory Road	04 April 2022	4
20	LVA - A14 bridge over the River Cam		2
21/E3	HER - Stourbridge Common - west	30 February 2022	3
21/E3	HER - Stourbridge Common - west	13 April 2022	4
22	HER - Chapel of St Mary Magdalene, Newmarket Road	04 March 2022	4
23	LVA/HER - Horningsea Road bridge over A14	30 March 2022	3
24	LVA/HER - Fen Ditton Conservation Area, High Street	30 March 2022	3
E1	LVA - Chisholm Trail bridge on River Cam	04 April 2022	4
E2	LVA - Chisholm Trail	04 April 2022	4
E4	LVA - Stourbridge Common, riverside	30 March 2021	3
E5	Discovery Way		2
E6	Fen Road		2
P1	LVA - Hamcamlow Way - north	14 March 2022	3
P1	LVA - Hamcamlow Way - north	04 April 2022	4
P4	LVA - Little Willbraham Road	15 March 2022	3
P4	LVA - Little Willbraham Road	05 April 2022	4
P5	LVA - Worts' Causeway/Shellford Road	07 April 2022	4
P6	LVA - Linsell Road, West Pit LNR	05 April 2022	4
P7	LVA - Redmeadow Hill	16 February 2021	3
P8	HER - Coronation Avenue, Anglesey Abbey	03 March 2022	4

Table 1

Guide to reading this AVR study

VIEWPOINT	TYPE/AVR	COMMENT
1 - LVIA - Footbridge over A14	NEC LCVIA VPS / Excluded as the proposal is not visible	
2 - LVIA - Bramblefields LNR	4/0	-
3 - HER - Castle Mound	4/0	Appendix F / Excluded in the LVIA as the proposal is not visible
4 - LVIA - Cowley Road	4/3	-
5 - LVIA/HER Ditton Meadow - Footpath 85/2	4/0	NEC LCVIA VP2
6 - HER - Green End	4/2	-
7a - LVIA/HER - Footpath 162/1 at Fen Road	Excluded as the proposal is not visible	
7b - LVIA/HER - Footpath 162/1 at Bolts Bite Lock	Appendix F / Excluded as the proposal is not visible	
7c - HER - Harmcamlow Way at Biggin Abbey	4/0	NEC LCVIA VP4
8 - LVIA/HER - Footpath 85/6 Fen Ditton	4/3	NEC LCVIA VP3
9 - LVIA/HER - Field Lane byway	4/3	-
10 - LVIA/HER - Low Fen Drove way - west	4/0	-
11 - HER - Low Fen Drove way - east	4/0	Excluded in the LVIA as the proposal is not visible
12 - HER - Low Fen Drove way - south	4/0	Excluded in the LVIA as the proposal is not visible
13 - LVIA - Byway 162/3	NEC LCVIA VP6 / Excluded as the proposal is not visible	
14 - LVIA - Guided busway	4/3	-
15 - LVIA/HER - Ditton Meadows	4/3	NEC LCVIA VP1
16 - LVIA/HER - Stourbridge Common	4/3	-
17 - HER - East of Milton Conservation Area	2/1	-
18 - HER - St Peter's Church, Horningsea	2/0	-
19 - HER - Horningsea Conservation Area, Priory Road	4/2	-
20 - LVIA - A14 bridge over the River Cam	2/2	Type 2 due to safety issue in proving a photograph and survey from the A14
21/E3 - HER - Stourbridge Common - Red Lion bridge	4/2	-
22 - HER - Chapel of St Mary Magdalene, Newmarket Road	4/2	Excluded in the LVIA as the proposal is not visible
23 - LVIA/HER - Horningsea Road bridge over A14	Excluded as the proposal is not visible	
24 - LVIA/HER - Fen Ditton Conservation Area, High Street	Excluded as the proposal is not visible	
E1 - LVIA - Chisholm Trail bridge on River Cam	4/3	-
E2 - LVIA - Chisholm Trail	4/3	-
E4 - LVIA - Stourbridge Common, riverside	Excluded as the proposal is not visible	
E5 - LVIA - Discovery way	2/2	Added post agreement of technical visualisations
E6 - LVIA - Fen Road	2/2	Added post agreement of technical visualisations
P1 - LVIA - Harmcamlow Way - north	4/0	-
P4 - LVIA - Little Wilbraham Road	4/0	-
P5 - LVIA - Worts' Causeway/Shellford Road	4/0	Appendix F
P6 - LVIA - Limekiln Road, West Pit LNR	4/0	Appendix F
P7 - LVIA - Redmeadow Hill	Appendix F / Excluded as the proposal is not visible	
P8 - HER - Coronation Avenue, Anglesey Abbey	4/0	-



fig 1

fig 2



fig 3

Table 1 summarises the agreement reached in discussion with the LPA, through the utilisation of VU.CITY and a variety of initial technical visualisations, on the selection of viewpoints to be considered in the LVIA and heritage assessments, and the approach to technical visualisations. It should be noted that views to inform the heritage assessment (HER in Table 1) are considered in the relevant ES chapter.

Viewpoints that are excluded from the LVIA were tested with VU.CITY and on the site surveys. as shown in fig 1.

fig 2 VU.CITY is currently limited to outputting images in the 16:9 ratio as most of its use is screen/monitor based. To match the ratio of the type 4 photography, increasing the field of view and cropping the VU.CITY render is necessary.

Lens info for VU.CITY renders are therefore labelled as approximations fig 3.

Viewing the verified photomontages

All verified photos were taken using a **Canon 6D** camera with a **Canon EF 50mm f/1.4 USM Fixed Lens**.

The final output of the RAW/JPEG files is **5472 x 3648** at **300dpi**. This equates to a printable size of **463.3mm x 308.86mm**.

The Landscape Institute suggests that "A 'mathematically correct' image is established for a 50mm FL approximately 39.6 Horizontal Field of View (HFoV) image, printed at a size of **390mm x 260mm** on an A3 sheet, and held at 542mm^1 from the eye. [1. Note that 542mm simply establishes a mathematical reference point. Generally, there is no need to hold the image at such a specific distance.] This 'monocular view' represents a reference point of 100% in this guidance note, against which enlargements, such as 150%, can be described. For example, a 50% increase in image size can be described as a 150% enlargement."

Verified photographs have therefore been reduced to **84% of their actual printable size** in order to conform to the Landscape Institutes guidance for printing 50mm lens images on A3 paper at 390mm x 260mm. A scale millimetre ruler has been applied to all verified photos in order to verify the reduction amount and that the image has not been cropped or distorted in any way when reproduced. It should be noted that enlarging AVR's above 100% will begin to expose pixel size to the naked eye and diminish the verifiability of an image.

Finally, this document has enough 'bleed' on the edges to allow for printing to 'actual size' (in printer settings) without cropping any information. This will ensure that the ruler below aligns with real life. Using the 'fit to page' setting when printing will result in a further reduced image and because printers vary in their ability to print to the edge of a page.

Photo at 100%



Photo at 84%



1cm²
1:1



Outline Application S8



Outline Application S9



Outline Application S11 - S21



Detailed Application



LAB

LAB

Residential

Office

LAB

Mobility Hub

One Milton Avenue



Outline Application S8



Outline Application S9



Outline Application S11 - S21



Detailed Application



Residential

One Milton Avenue

Office

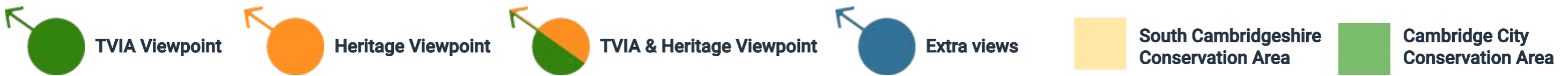
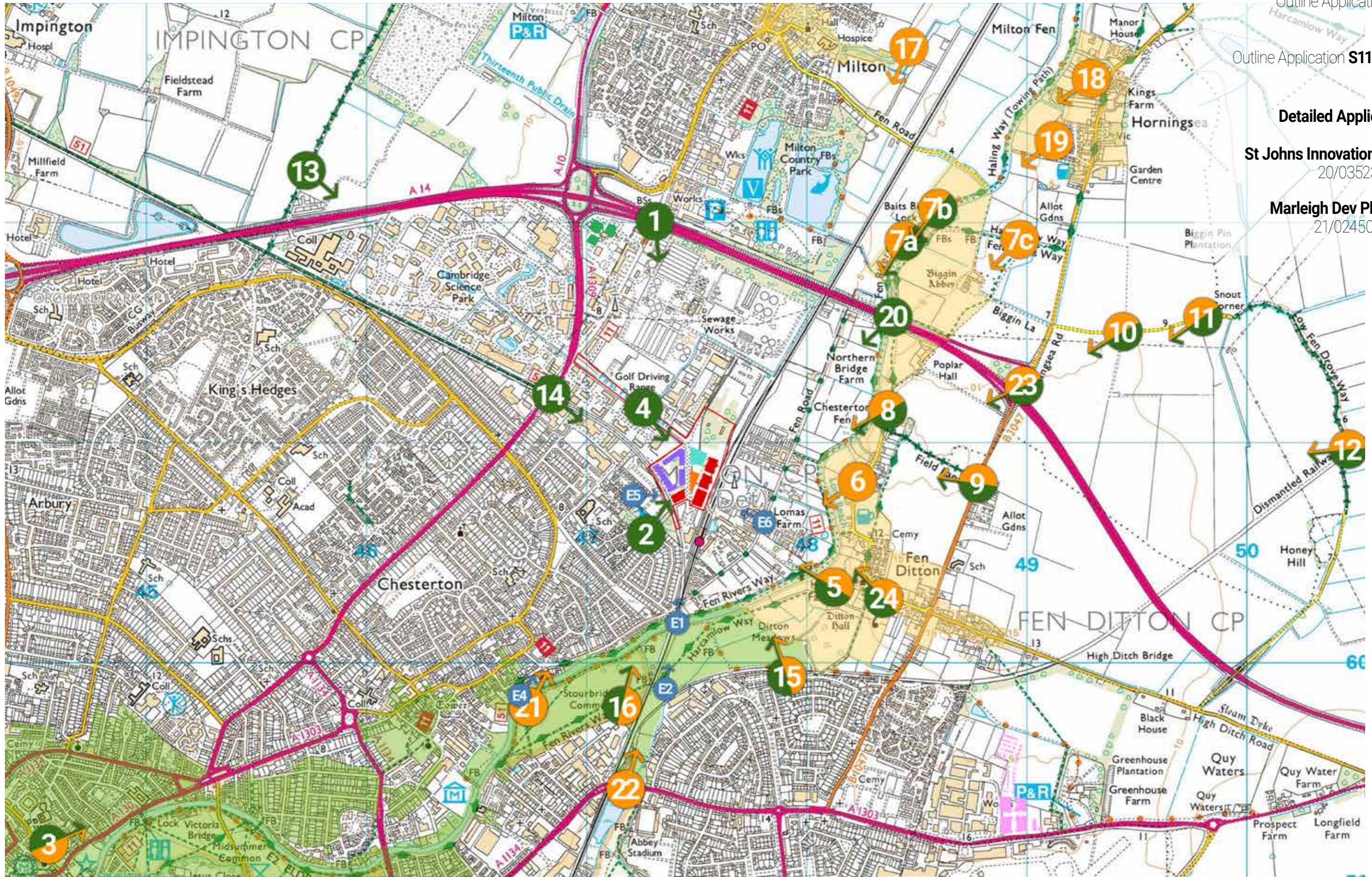
LAB

Mobility Hub

LAB

LAB

View locations



View locations + ZTV Detail Application - Trees OFF

Outline Application S8

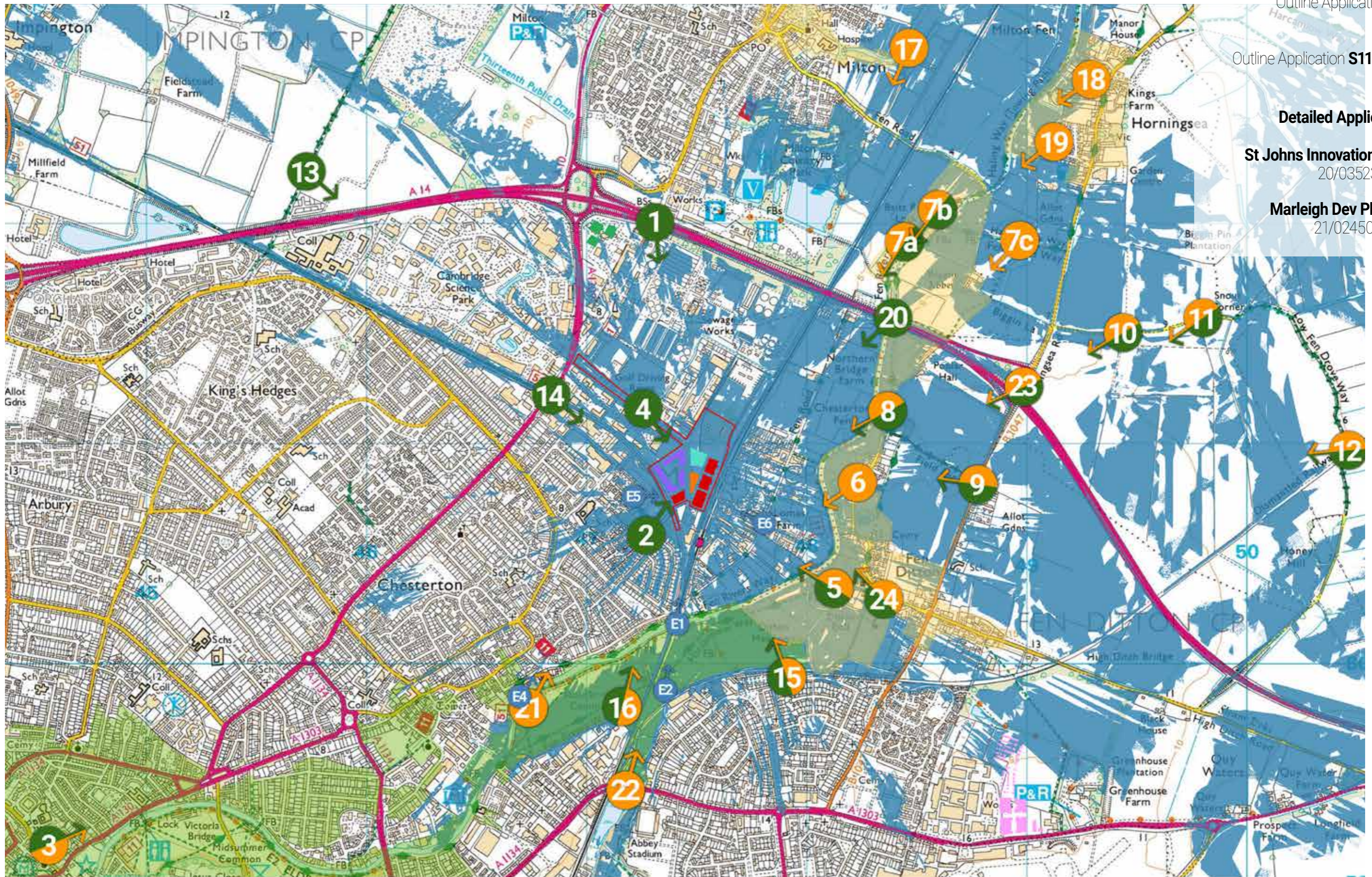
Outline Application S9

Outline Application S11 - S21

Detailed Application

St Johns Innovation Park
20/03523/FUL

Marleigh Dev Phase2
21/02450/REM



TVIA Viewpoint

Heritage Viewpoint

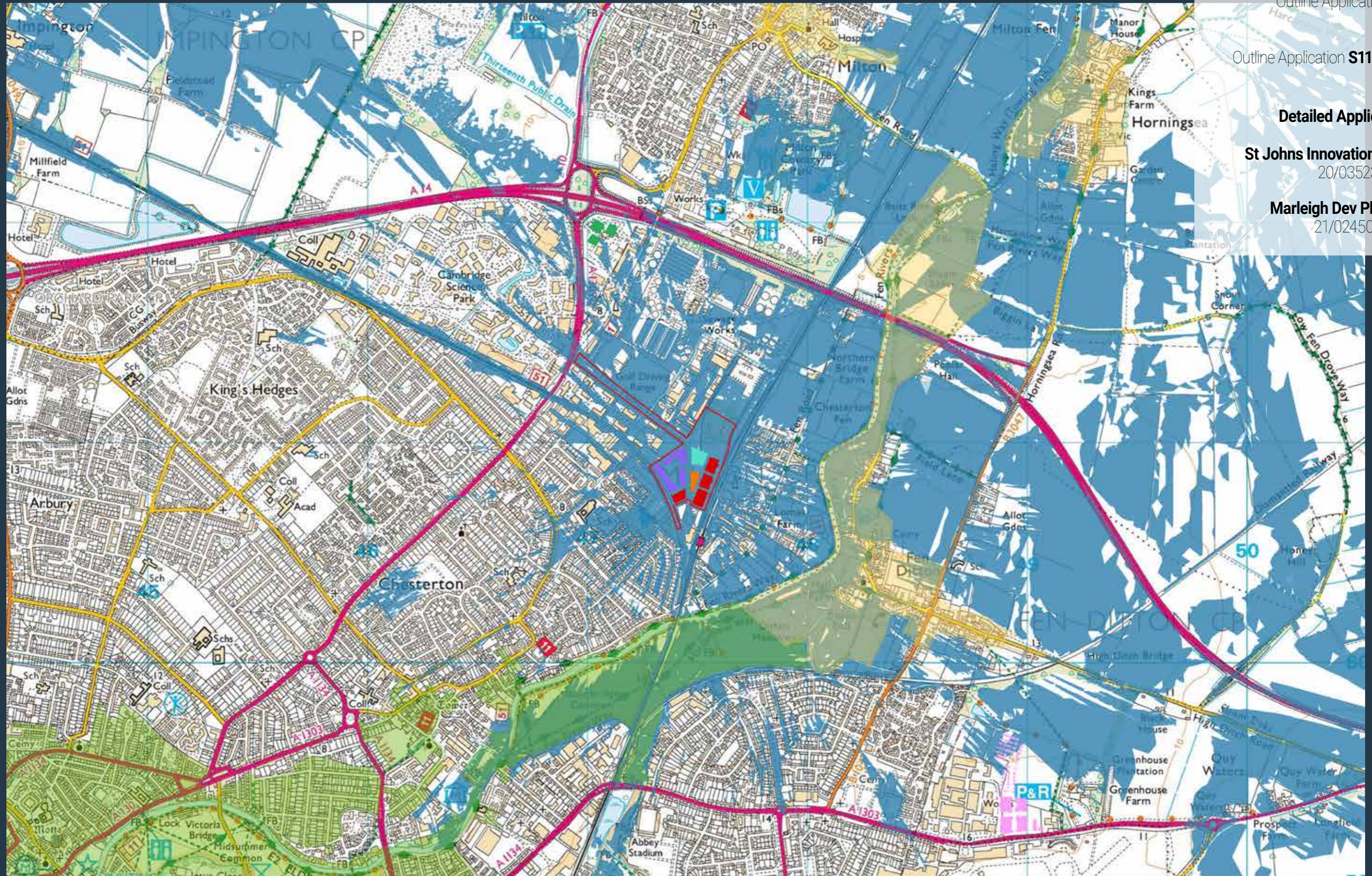
TVIA & Heritage Viewpoint

Extra views

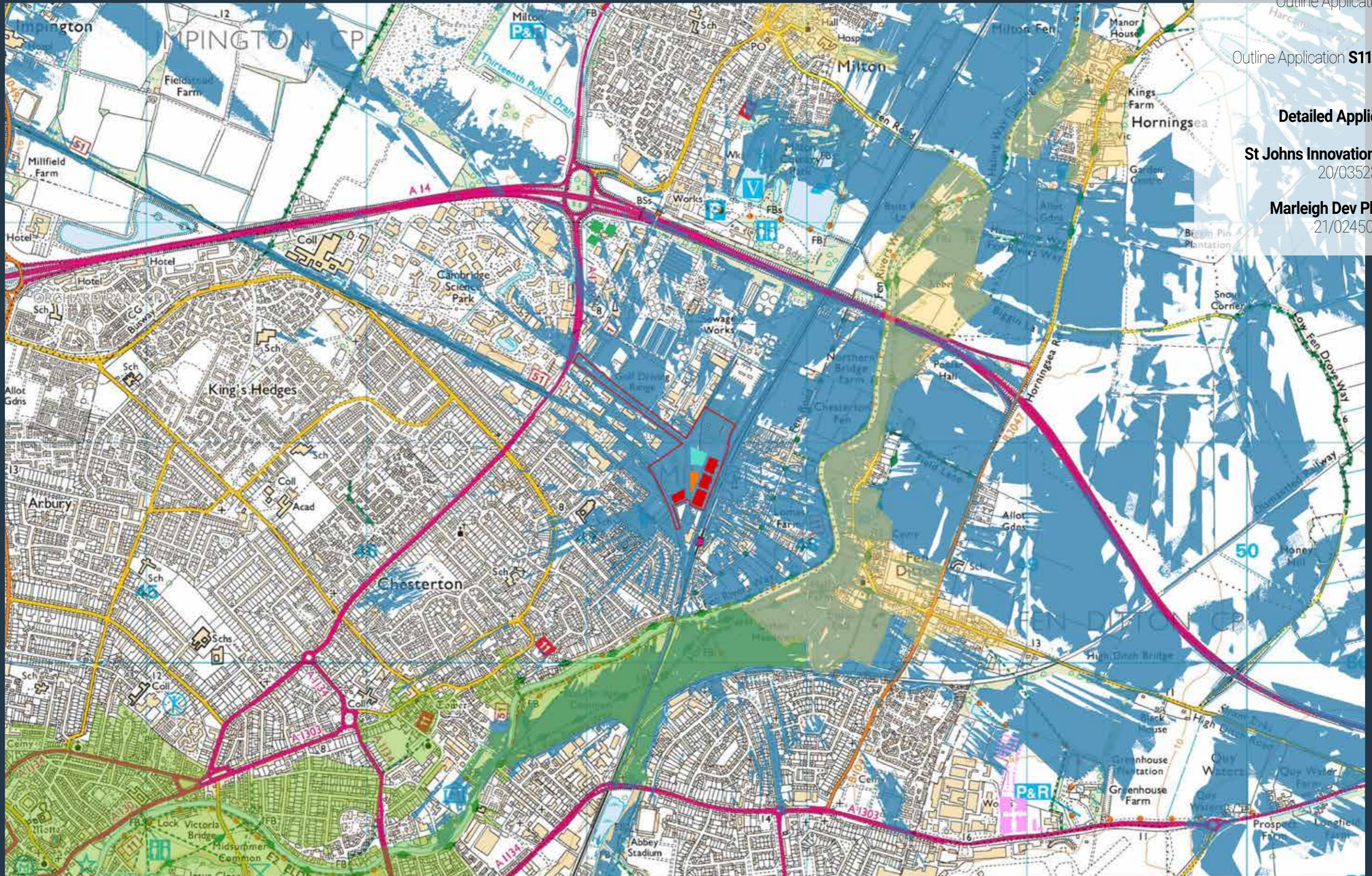
South Cambridgeshire Conservation Area

Cambridge City Conservation Area





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- St Johns Innovation Park
20/03523/FUL
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Outline Application S8

Outline Application S9

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Detailed Application

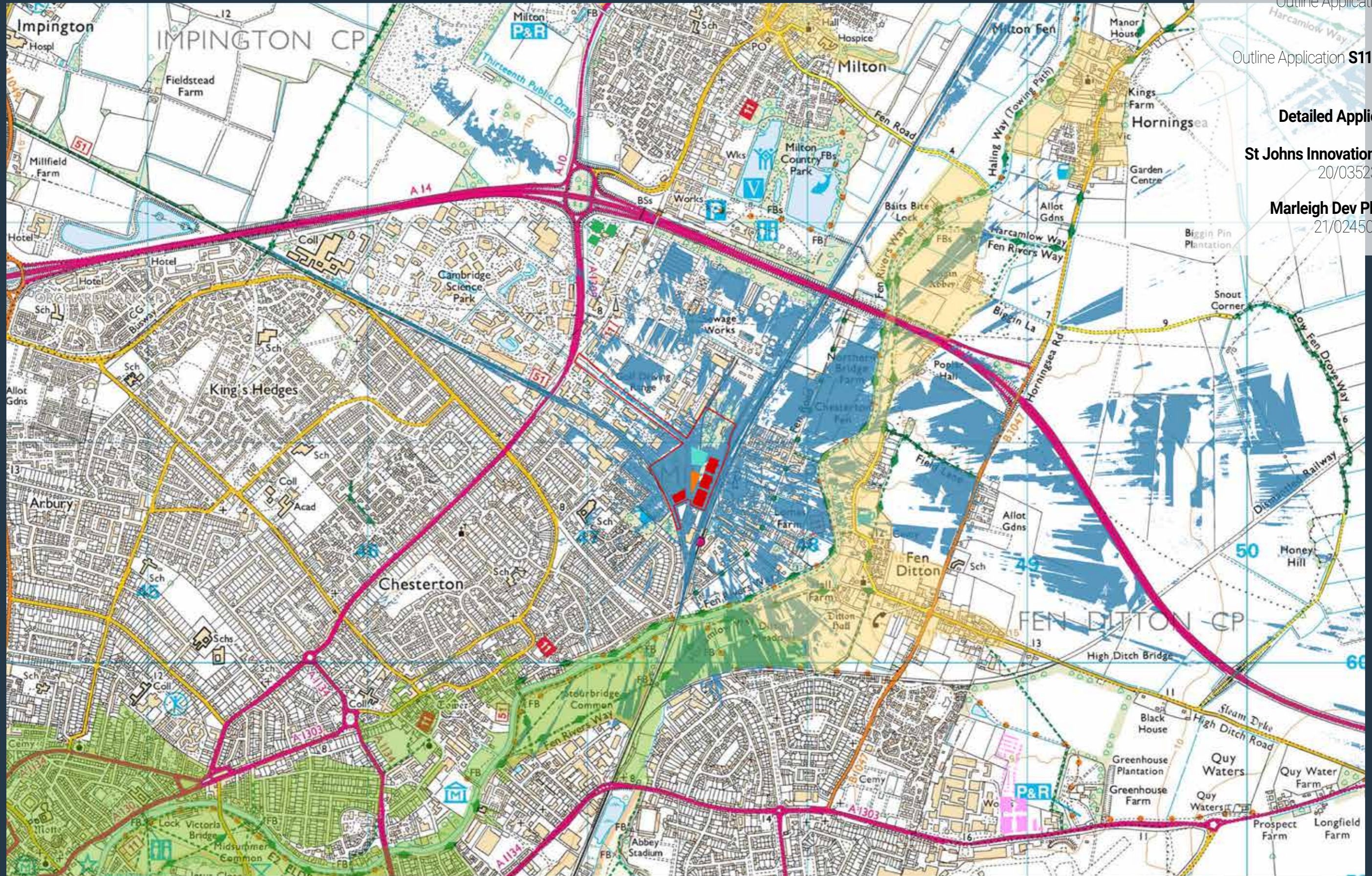
St Johns Innovation Park
20/03523/FUL

Marleigh Dev Phase 2
21/02450/REM

Site visibility at 1.6m
above ground height

South Cambridgeshire
Conservation Area

Cambridge City
Conservation Area



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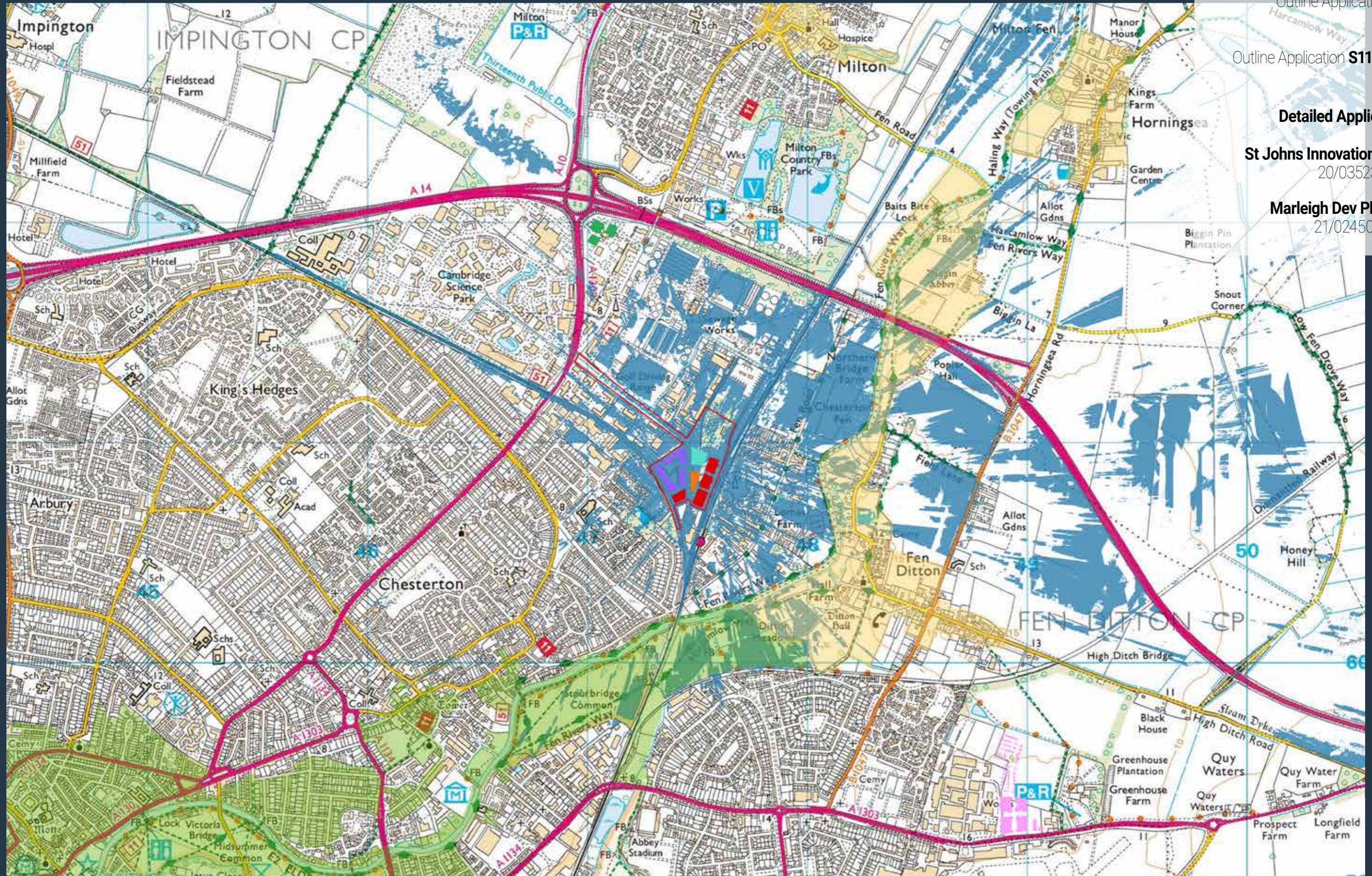
St Johns Innovation Park
20/03523/FUL

Marleigh Dev Phase2
21/02450/REM

Site visibility at 1.6m
above ground height

South Cambridgeshire
Conservation Area

Cambridge City
Conservation Area



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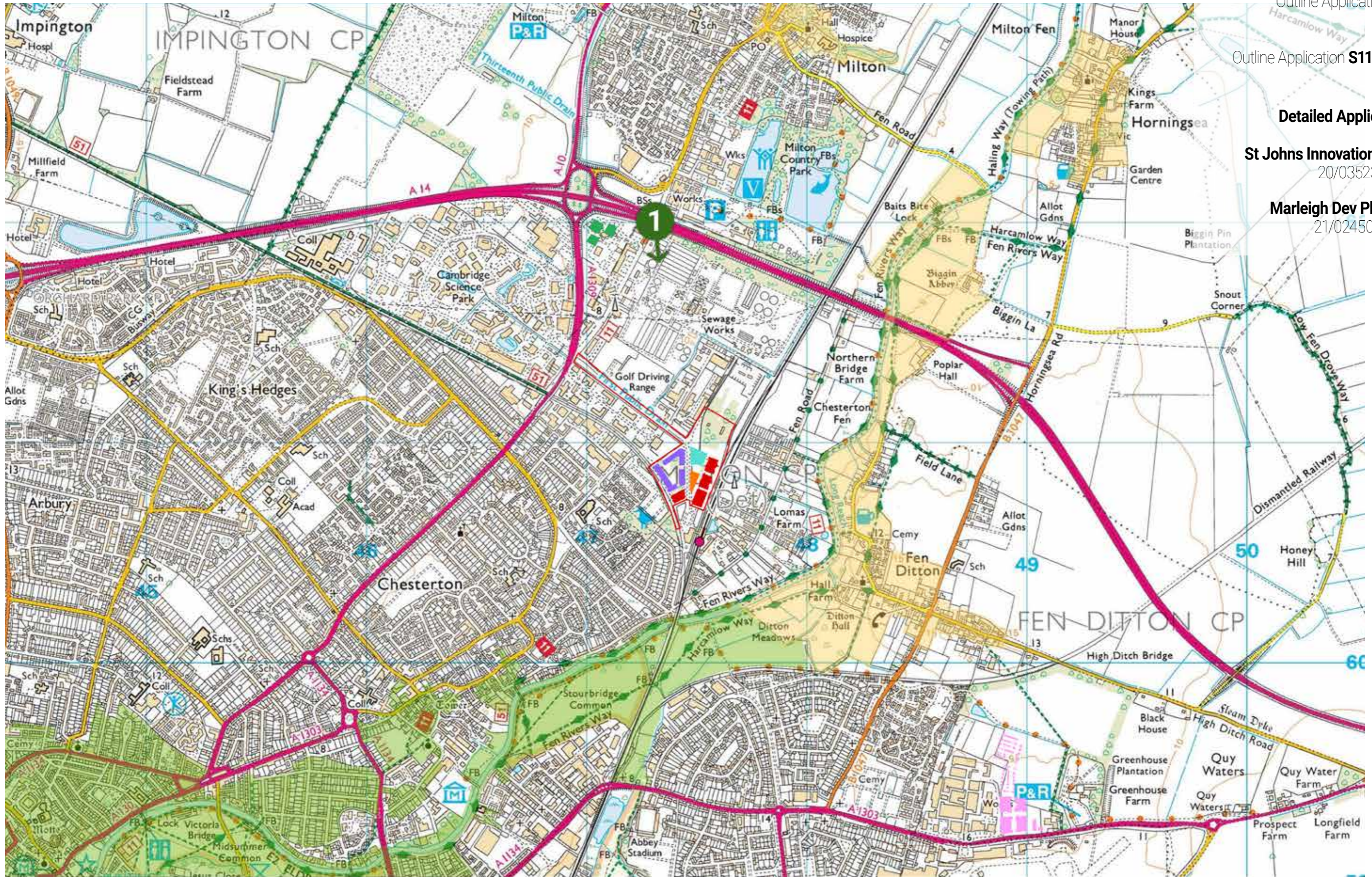
Marleigh Dev Phase2
21/02450/REM

Site visibility at 1.6m
above ground height

South Cambridgeshire
Conservation Area

Cambridge City
Conservation Area

01 Footbridge over A14



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TVIA Viewpoint

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TVIA & Heritage Viewpoint

Extra views

South Cambridgeshire Conservation Area

Cambridge City Conservation Area



01

LVIA - Footbridge over A14

Photo

AVR

Camera Location

Lens

Type 1

n/a

547306, 262001

50mm

WINTER

EXISTING



30th March 2021

WINTER



PROPOSED + 1 CAMBRIDGE SQUARE

02 Bramble LNR

Outline Application S8

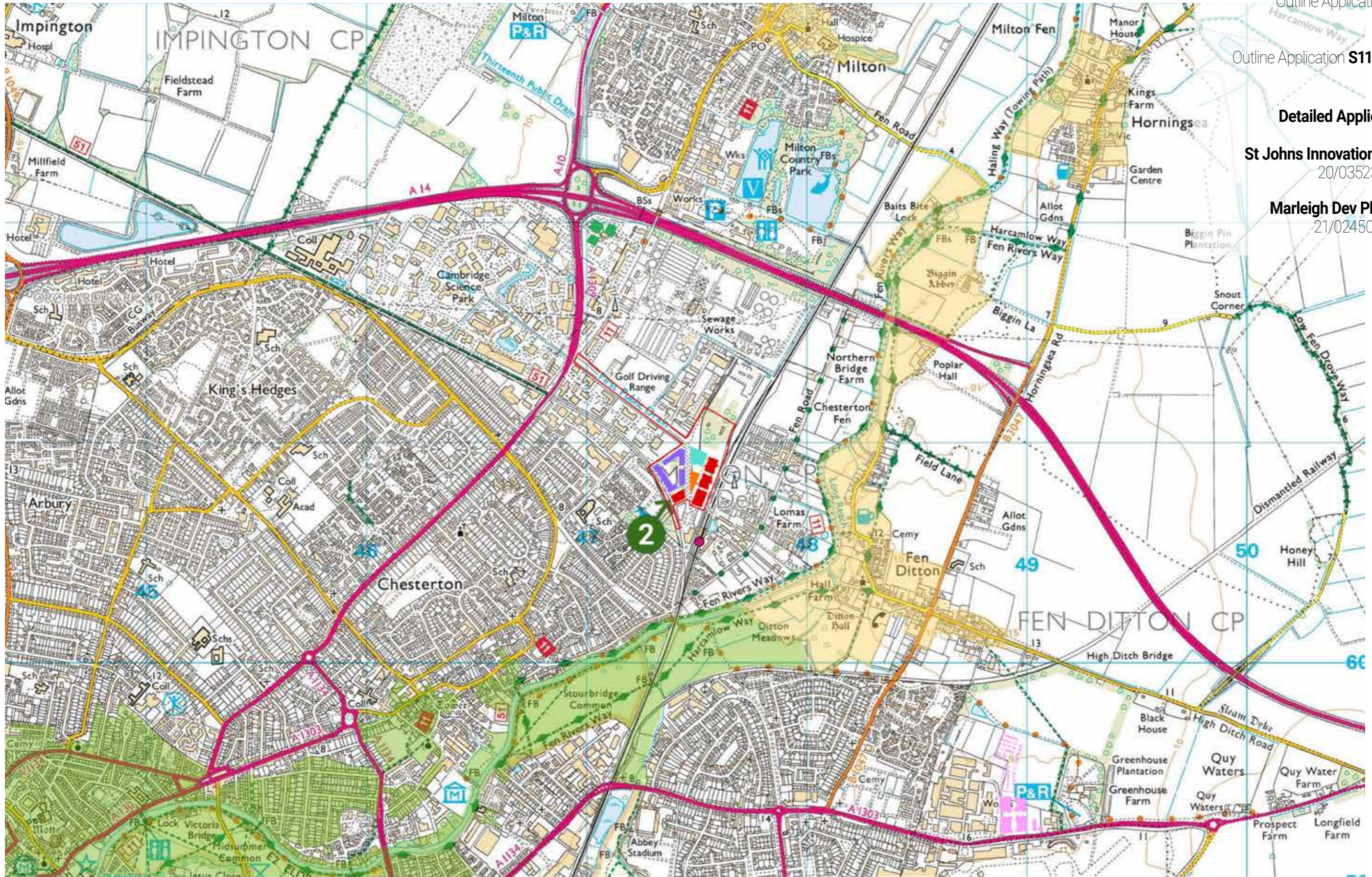
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20/03523/FUL

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TVIA Viewpoint

Heritage Viewpoint

TVIA & Heritage Viewpoint

Extra views

South Cambridgeshire Conservation Area

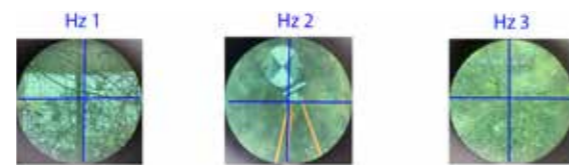
Cambridge City Conservation Area



MSA-No: 5698
Camera No: V02
Project: Cambridge Views
Description: Nail in the grass
Details: Camera height: 1.60m
Coordinates (E N H): 547263.9860 260632.9830 6.5130

Camera: Canon EOS 6D
Lens: Canon Zoom Lens EW82 16-35mm, EF 50mm
Focal length: 16mm, 24mm & 50mm
Shift/Tilt: 0 Degrees

Date and time: 07/03/2022 11:09



> Location Map



> MSA Camera Position



> MSA 24mm Photo



> Zoomed MSA Camera Position

WINTER

EXISTING



7th March 2022



WINTER

15 years

7th March 2022



PROPOSED + 1 CAMBRIDGE SQUARE

03 Castle Mound

Outline Application S8

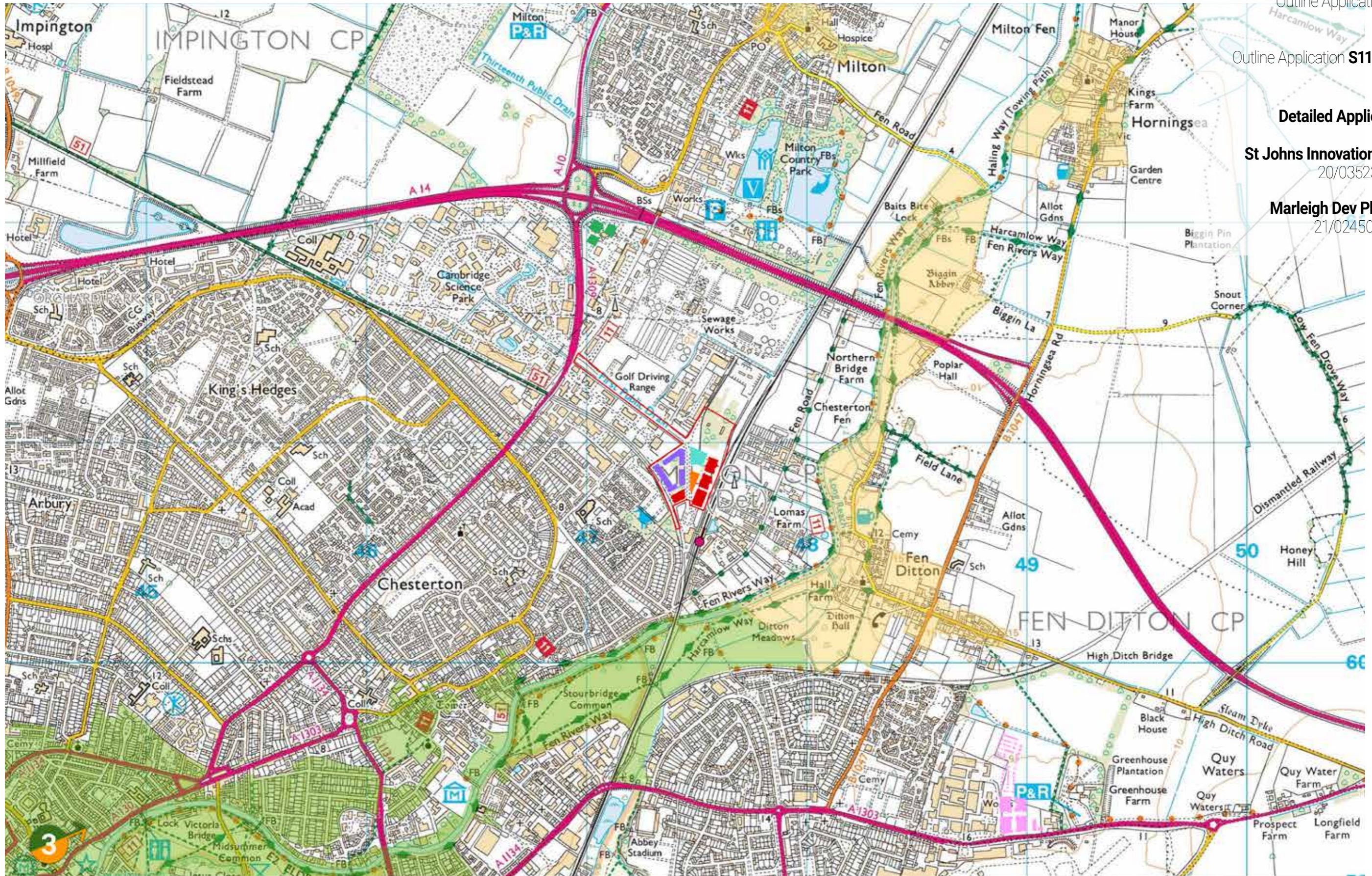
Outline Application S9

Outline Application S11 - S21

Detailed Application

St Johns Innovation Park
20/03523/FUL

Marleigh Dev Phase2
21/02450/REM



WINTER

EXISTING

19th November 2021

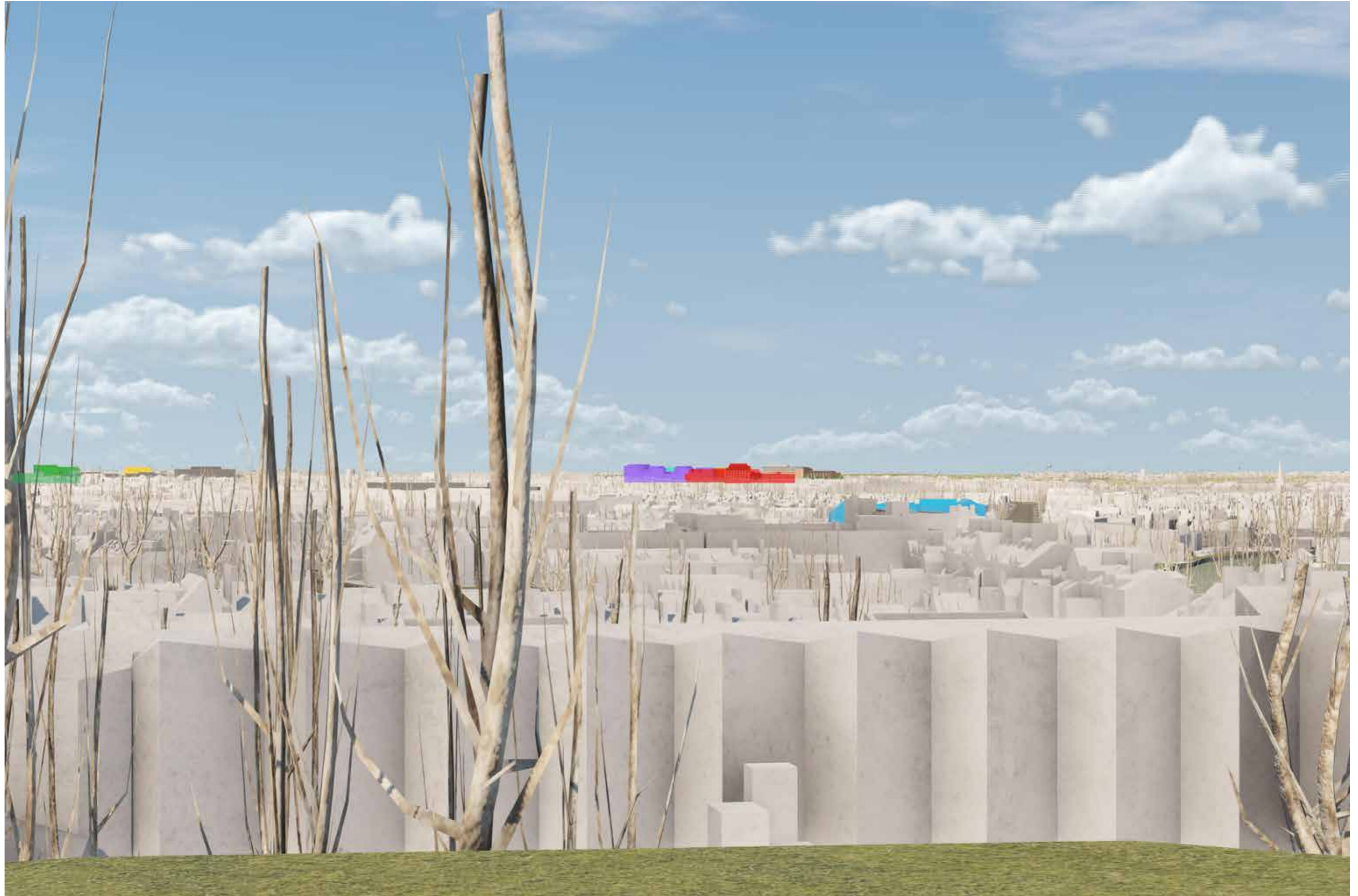


WINTER



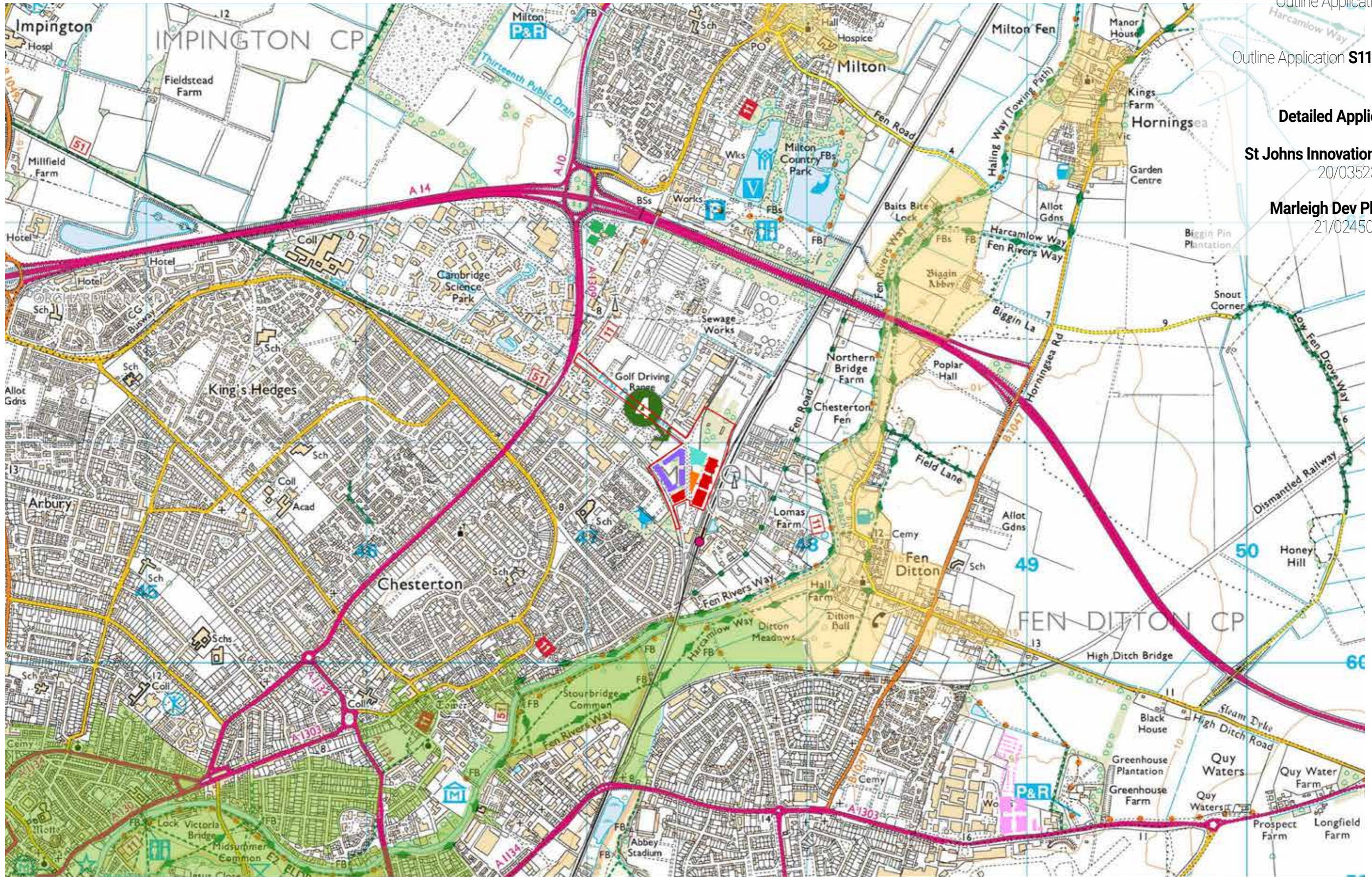
PROPOSED

WINTER



PROPOSED

04 Cowley Road



Outline Application S8

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TVIA Viewpoint

Heritage Viewpoint

TVIA & Heritage Viewpoint

Extra views

South Cambridgeshire Conservation Area

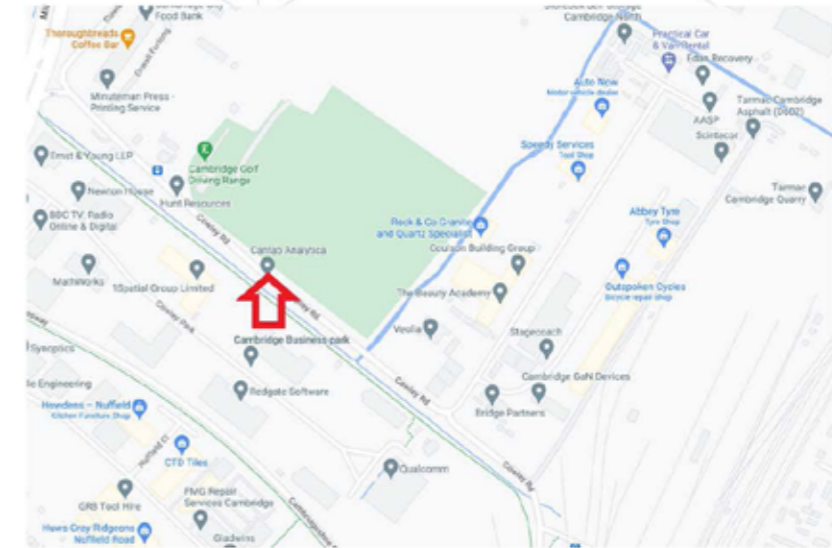
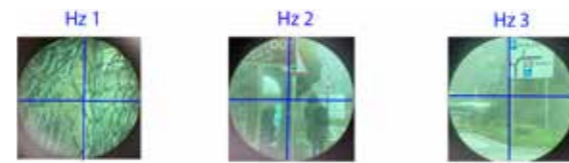
Cambridge City Conservation Area



MSA-No: 5698
 Camera No: V04
 Project: Cambridge Views
 Description: Nail in the Pavement
 Details: Camera height: 1.60m
 Coordinates (E N H): 547236.219 261176.503 7.219

Camera: Canon EOS 6D
 Lens: Canon Zoom Lens EW82 16-35mm, EF 50mm
 Focal length: 16mm, 24mm & 50mm
 Shift/Tilt: 0 Degrees

Date and time: 02/03/2022 15:45



> Location Map



> MSA Camera Position



> MSA 50mm Photo



> Zoomed MSA Camera Position

WINTER

EXISTING



2nd March 2022

WINTER

PROPOSED

15 years

19th November 2021



WINTER

15 years

19th November 2021



PROPOSED + CUMULATIVE



05 Ditton Meadows Footpath 85/2

Outline Application S8

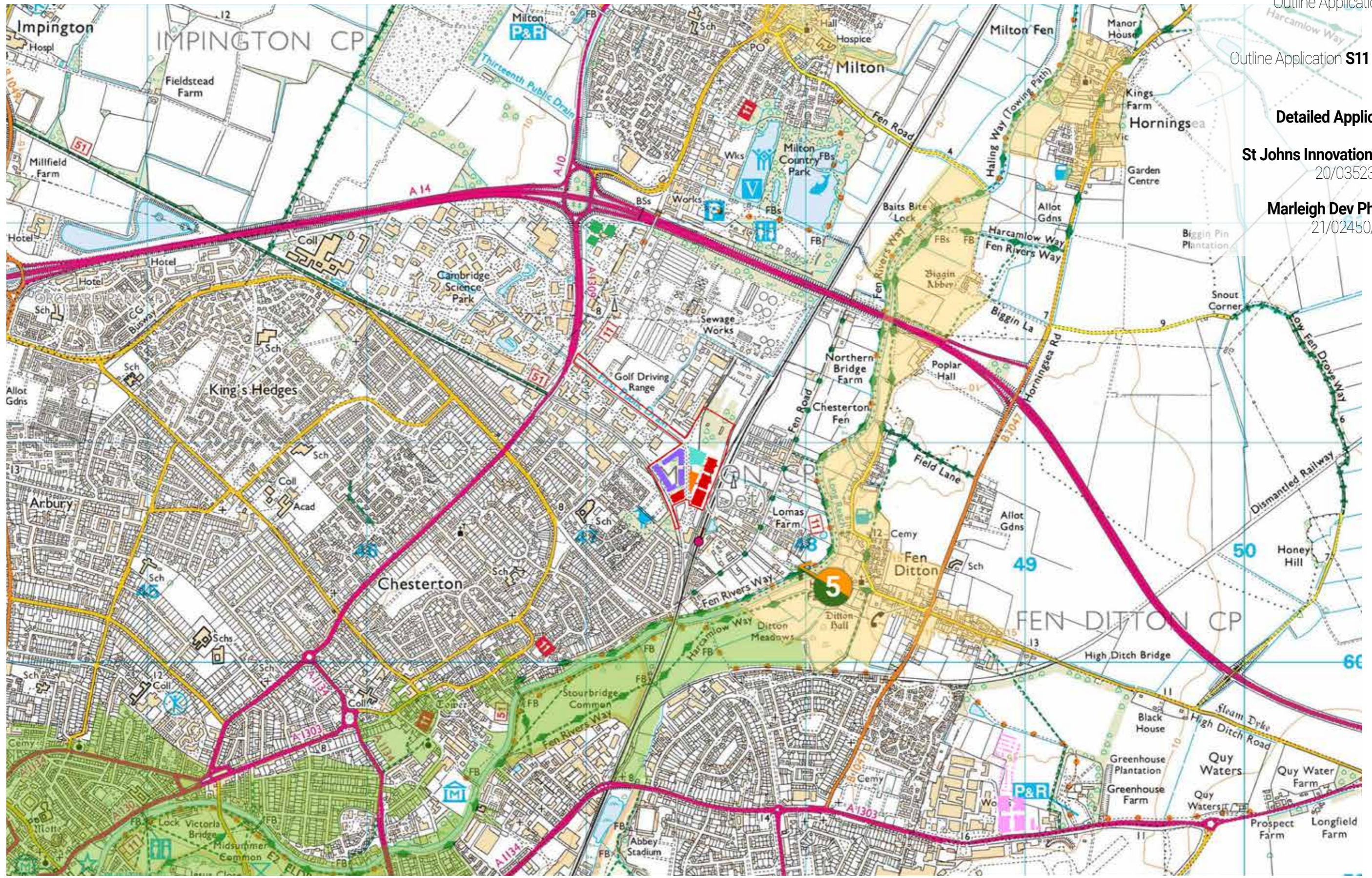
Outline Application S9

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