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LAND OFF HEMPSTED LANE, GLOUCESTER
PROPOSED RESIDENTIAL DEVELOPMENT OF UP TO 245 DWELLINGS

TECHNICAL NOTE ON HIGHWAYS AND TRANSPORT MATTERS
May 2022

1.0 INTRODUCTION

A previous application for this site was submitted in 2020 (planning reference 20/00315/OUT). Due to cyber issues with the planning website access to documentation for that application is not readily available and the application is being appealed. This Technical Note is now submitted as part of the appeal against the non-determination of the application and will be consulted upon as part of a bespoke consultation exercise agreed with the Inspector and LPA.

Highways comments for the appealed application were received from Gloucestershire County Council and a number of areas of concern were raised based on the Transport Assessment submitted with the application. The same Transport Assessment is being submitted with this application and this Technical Note should be read in conjunction with the Transport Assessment as it seeks to provide additional information to address the concerns raised in the Consultee Response. The matters covered are:

i) Main site access and visibility splays.

ii) Pedestrian/cycle access for the site.

iii) Location of local facilities and standard of pedestrians/cycle infrastructure on the key routes.

iv) Location of bus stops.

v) Trip generation.

vi) Traffic impact.

2.0 ACCESS AND VISIBILITY SPLAYS

The Consultee Response raises the concern that the visibility splays at the vehicular access to the site are based on the speed limit and not actual speeds. Although the use of speed limits is a common approach accepted by many local authorities, a speed survey has been carried out to address this point. A radar gun survey was carried out on Thursday 7th April 2022 by an experienced survey contractor and the results are enclosed as Appendix 1. This confirms 85th percentile speeds in dry weather in free flow conditions as 32 miles per hour for vehicles travelling up Hempsted Lane away from the A430 and 31 miles per hour for vehicles travelling towards the A430. The speeds are thus very consistent with the speed limit. A splay for a 32 miles per hour speed based on Manual for Streets would be 2.4 x 47 metres, an increase in the Y distance of 4 metres. Reference to the Access Plan in Appendix 2 shows that the modest increase in length to the vision splay is easily accommodated.

3.0 PEDESTRIAN/CYCLE ACCESS

As this is an outline application the internal layout for the site is not yet known and this will obviously influence the desire lines from within the site. However in addition to the main vehicular access which includes pedestrian footways and crossing points, the Development Framework (CSA/6036/103 Rev A) identifies additional pedestrian access to the site on to Hempsted Lane at the southern end of the site near the A430 junction. It is likely this access will utilise the existing field access which is to be retained and can be easily modified to allow pedestrian/cyclists. Suitable connections to the main site area will be established at the reserved matters stage.

A further connection is proposed on to Rea Lane, but as the name implies this is a country lane which although lightly trafficked has no pedestrian facilities.

4.0 LOCATION OF LOCAL FACILITIES AND STANDARD OF INFRASTRUCTURE

The location of local facilities within walking distance of the site are shown on Figure 2b of the Transport Assessment and listed on page 9 of the same document

with actual walk distances from the site entrance. The two main routes for walk trips are into Hempsted for the Post Office / Convenience Store and the Primary School and across the canal and up Bristol Road to Lidl and other facilities. These routes are described below and a series of photographs are included in Appendix 3 for reference.

School and Post Office / Convenience Store

The route for these two important facilities is identical apart from the very end section. Leaving the site from the main pedestrian access point you cross the lane over to the existing footway on the opposite side. This footway is of generally good width and alignment and the view from the site looking down to the A430 junction is shown on Photograph 1. You then continue up the lane and Photograph 2 shows a similar view looking down from further up. You then continue past Bridge Close and around the bend where there are footways of good width on both sides (Photograph 3) although there is a little encroachment on the northern side. From there you progress past Waters Reach (Photograph 4 – dropped kerbs with tactile paving) and continue along (Photograph 5 looking back) where there is a good width footway on the eastern side. Passing Court Gardens at the mini-roundabout (Photograph 6) and further along the lane there continues to be a good width of footway (Photograph 7). An uncontrolled crossing with road narrows and tactile paving (Photograph 8) allows easy crossing back to the southern side up to the mini-roundabout junction with St. Swithuns Road. From here it is a short walk up St. Swithuns Road (Photograph 9) to the Primary School (and Church) and up Hempsted Lane to the Post Office / Shop (Photograph 10). The actual walk distance from the main site entrance is 470 metres to the Post Office and 700 metres to the School. As is clear from the photographs the complete route can be done on pedestrian footways of good width and alignment with appropriate crossing points where necessary. Widths are typically between 1.5 and 2.0 metres but are a little wider in places. Some local maintenance would be of benefit.

For the facilities along Bristol Road, you would come out of the site again cross over to the footway on the other side and walk down to the A430 junction. Here there is a signalised junction with a controlled pedestrian crossing point (Photograph 11, 12 and 13). Once over the road there is a very short walk to the swing bridge across the canal

(Photograph 14). The bridge is pedestrian/cyclist only so traffic flows are very low and there is a good pedestrian footway alongside. Once over the bridge it is just a very short distance to the junction with Bristol Road (Photograph 15 and 16). As can be seen (Photograph 16) there is a good width pedestrian footway alongside Bristol Road and this continues along its length and it is a relatively short distance to the Lidl store which can be seen in the distance of Photograph 17 which again confirms a suitable footway. Beyond Lidl is the industrial site which includes a further range of retail units and opposite is The Avenue Public House. The Lidl store is a 910 metre walk distance from the main site entrance.

Overall therefore the Transport Assessment had previously confirmed a useful range of local facilities within walking distance of the site and it is confirmed that these can be walked on an appropriate standard of infrastructure.

Cycling offers a wider range of acceptable facilities to residents including the Secondary Schools, Gloucester College and the City Centre. The full range of facilities within a five kilometre catchment is too long to easily list but some of the more important ones are set out in Figure 2c of the Transport Assessment.

It follows of course that the facilities within walk distance of the site are also within cycle distance. Within Hempsted cycling is on-road but traffic flows are modest. Bristol Road does have some short lengths of cycle lane but they are not continuous.

For the main facilities in and around the City Centre, there are two attractive routes for cyclists. The first of these is alongside the canal on a dedicated hard surfaced and lit pedestrian/cycle route which actually is part of national cycle routes 41 and 45. The route can be accessed immediately before the swing bridge over the canal previously described so the first part of the journey is the same as for pedestrians except cyclists can choose whether to cross the A430 signalised junction with the cars or dismount and use the pedestrian controlled crossing. Photograph 19 shows the start of the route alongside the canal and the standard of surface is clear. Photograph 20 confirms a similar standard further along the route. The route “emerges” alongside Gloucester College (Photographs 21 and 22) on to Llanthony Road. From here the cyclists go over another swing bridge over the canal. This swing bridge is restricted to pedestrians, cyclists, buses and taxis so again traffic flows on the approach are low.

The route then continues past the northern end of Gloucester Quays (Photograph 23). It is then a short distance up Southgate Street, which has marked cycle lanes along most of its length, up to the start of the main City Centre (Photograph 24). This route is 2.4 kilometres from the site access.

As an alternative there is a dedicated pedestrian/cycle lane off road alongside the A430. It is hard surfaced, lit and of full width (just over 3 metres) and the start of the route is shown on Photograph 18. This cycle lane runs consistently up to the junction with Llanthony Road where a controlled crossing point is available. It is then just a short ride on the lightly trafficked road to meet up with the previous route at Gloucester College and from there to the main Centre the route is the same. There are therefore two alternative high quality cycle routes to the wide range of facilities available in and around the City Centre.

Both routes are highlighted on the Gloucester Cycle Map as traffic free routes and on this map the City Centre actually covers a wider area so for example Gloucester College on this map falls well within the City Centre.

For bus users the nearest stops are shown on Figure 2b. The closest are on the A430 just north of the junction with Hempsted Lane. Both stops can actually be seen on Photograph 18 and both have bus shelters. In addition the controlled crossing at the Hempsted Lane junction means the stop on the western side can be safely accessed. The bus services from these stops are set out in the Transport Assessment including full timetables but basically they provide a very regular service from early morning until early evening (typically three buses an hour) with further late night services. This holds for Monday to Saturday with, as is typical, a reduced service on Sunday. The route runs between Quedgeley and Brockworth including the City Centre.

Further services, including another regular service between Quedgeley and Gloucester, are available from stops on Bristol Road. These are also set out in the Transport Assessment. Overall therefore a number of routes are available providing very regular services from early morning until late evening.

The A430 stops are located 240 metres from the main site access. The Bristol Road stops are 300 metres northbound and 450 metres southbound from the same

destination. Clearly therefore they are just a short walk from the site access. As this is an outline application the internal layout of the site is not defined, hence the use of the main site access as a measuring point. However the furthest point of the site from the site access is approximately 200 metres away. Therefore in simple terms the walk distance are:

A430	240-440 metres
Bristol Road North	300-500 metres
Bristol Road South	450-750 metres

These are all reasonable walk distances. In addition, as set out previously they are accessible via good standard pedestrian infrastructure. However more importantly they provide accessibility to a high level of public transport services and it is the level of service at the end of the walk which is an equally important factor.

Finally for more strategic travel the option for rail travel is set out in the Transport Assessment with a good level of service from Gloucester Railway Station.

Overall therefore it is clear that:

i) A wide range of facilities are accessible by the more sustainable modes of transport.

ii) These are well within accepted walk and cycle distances (including walk to bus stop).

iii) A good quality of infrastructure is available.

Clearly therefore the site provides significant opportunity to encourage travel by the more sustainable modes of transport.

5.0 TRAFFIC GENERATION

The Consultee Response queries the traffic generations on the basis that they are derived from the TRICS database and not calibrated against local data. In response:

i) TRICS is an accepted and respected database within the industry.

ii) For an extended period COVID would have ruled local data questionable.

iii) Gloucestershire County Council have themselves recently accepted a straight TRICS analysis for another application within the County (for a mixed-use development of 95 houses and 4467 square metres of office space) without the need for local calibration. (Application reference 21/01392/OUT.)

Based on iii) especially, their responses are inconsistent.

For comparison the accepted trip rates for the other site, which is located in a village outside Gloucester in a far less sustainable location, were as follows:

	Arrive	**Depart**
AM Peak	0.139	0.372
PM Peak	0.399	0.144

These are marginally higher than in the Transport Assessment for this site which, given the difference in location, is perfectly justified. The Transport Assessment assumed 245 units. This however is now reduced to 215 units so the analysis in the Transport Assessment is robust. However applying these new trip rates to 215 units would result in the following traffic generations:

	Arrive	**Depart**	**Total**
AM Peak	30	90	110
PM Peak	86	31	117

The total two-way trips in the Transport Assessment were:

AM Peak	117
PM Peak	113

The difference is a 7 trip reduction in the AM peak and just 4 more trips in the PM peak. Clearly therefore the change in trip rates is not material and in any case is offset by the reduction in housing numbers.

6.0 TRAFFIC IMPACT

The response rejects the traffic impact analysis in the Transport Assessment because of:

i) Trip generation.

ii) Use of Census Data for distribution.

iii) Requirement for a later design year.

iv) Geometric data for the junction modelling.

Trip generation has already been addressed.

With regards the use of Census Data for distribution this is a standard approach well established within the industry. Indeed Gloucestershire County Council have themselves accepted it elsewhere. The response refers to local data but a request for more information on the local data so far has not been answered.

With regards a later design year the assessment used a five year timeline to complete the development and so it establishes the effect of the development when complete. Again Gloucestershire County Council have accepted this elsewhere.

Finally with regards the geometric data, again Gloucestershire County Council have raised concerns but provided no detail on what measurements they are querying so this point is hard to address.

Further it is helpful to take a “common sense” look at the analysis. The table in the Transport Assessment showing the junction analysis summary (pages 21-23) shows that, although the junctions under analysis are not unsurprisingly busy, they operate well within capacity with all development in place. More importantly the impact of the development traffic itself is small with only minor changes to the degrees of saturation. This would not meet the criteria of a “severe impact”.

This is not surprising if the total traffic flows through the junctions are considered. For the design year with the committed development in place the proportion of traffic from the development in the AM peak is as follows:

Junction	Total Flows including Committed Development	Development Flows (215 units)	Percent
A430 / The Gallops	2604	66	2.5
A430 / Hempsted Lane	2714	101	3.7
A430 / Bristol Road	4069	35	0.9

The percentage increases are very small, all less than 4%, which would confirm development traffic is not a significant element of the performance of the junction. Typical daily variations in flow would have a greater impact than this. Even the Hempsted Lane junction, which takes the highest volume of development flows, does not show a significant increase.

All this confirms the conclusion that the development does not have a material or severe impact on the surrounding road network and any minor change in distribution or trip generation would not change the conclusion.

7.0 CONCLUSION

Overall therefore it is concluded that the information set out in this Technical Note confirms the original conclusions in the Transport Assessment.

APPENDIX 1

SPEED SURVEY

Free Flow Speed Report

Date: **Thursday 7th April 2022** Weather: **Sun, light cloud. Gusts**

Location: **Hempsted Lane, Gloucester** Speed Limit: **30**

Road at Start: **Dry** Road at Finish: **Dry**

Start Time: **11:30** Finish Time: **13:30**

Approach Direction: **Uphill** Approach Direction: **Downhill**

Reading	MPH	Reading	MPH
1	21	51	31
2	21	52	31
3	21	53	31
4	22	54	31
5	22	55	32
6	22	56	32
7	23	57	32
8	23	**58**	**32**
9	24	59	32
10	24	60	32
11	24	61	32
12	24	62	32
13	25	63	33
14	25	64	33
15	25	65	33
16	26	66	34
17	26	67	35
18	26	68	35
19	26	69	
20	26	70	
21	27	71	
22	27	72	
23	27	73	
24	27	74	
25	27	75	
26	27	76	
27	27	77	
28	28	78	
29	28	79	
30	28	80	
31	28	81	
32	28	82	
33	28	83	
34	28	84	
35	28	85	
36	28	86	
37	29	87	
38	29	88	
39	30	89	
40	30	90	
41	30	91	
42	30	92	
43	31	93	
44	31	94	
45	31	95	
46	31	96	
47	31	97	
48	31	98	
49	31	99	
50	31	100	

68 records (85% of 68 = 57.8)
Observed 85%ile speed = **32mph**

Reading	MPH	Reading	MPH
1	16	51	28
2	18	52	28
3	19	53	29
4	19	54	29
5	20	55	29
6	21	56	29
7	22	57	29
8	22	58	30
9	22	59	30
10	23	60	30
11	23	61	30
12	23	62	30
13	24	63	31
14	24	64	31
15	24	65	31
16	24	66	31
17	24	67	31
18	24	68	31
19	25	69	31
20	25	**70**	**31**
21	25	71	31
22	25	72	32
23	25	73	32
24	25	74	32
25	26	75	33
26	26	76	33
27	26	77	33
28	26	78	33
29	26	79	34
30	26	80	35
31	26	81	37
32	26	82	37
33	26	83	
34	26	84	
35	26	85	
36	27	86	
37	27	87	
38	27	88	
39	27	89	
40	27	90	
41	27	91	
42	27	92	
43	27	93	
44	27	94	
45	28	95	
46	28	96	
47	28	97	
48	28	98	
49	28	99	
50	28	100	

82 records (85% of 82 = 69.7)
Observed 85ile speed = **31mph**

Survey Vehicle parking in gateway opposite 153. Hi-Vis jacket was NOT worn during survey

APPENDIX 2

Access Plan

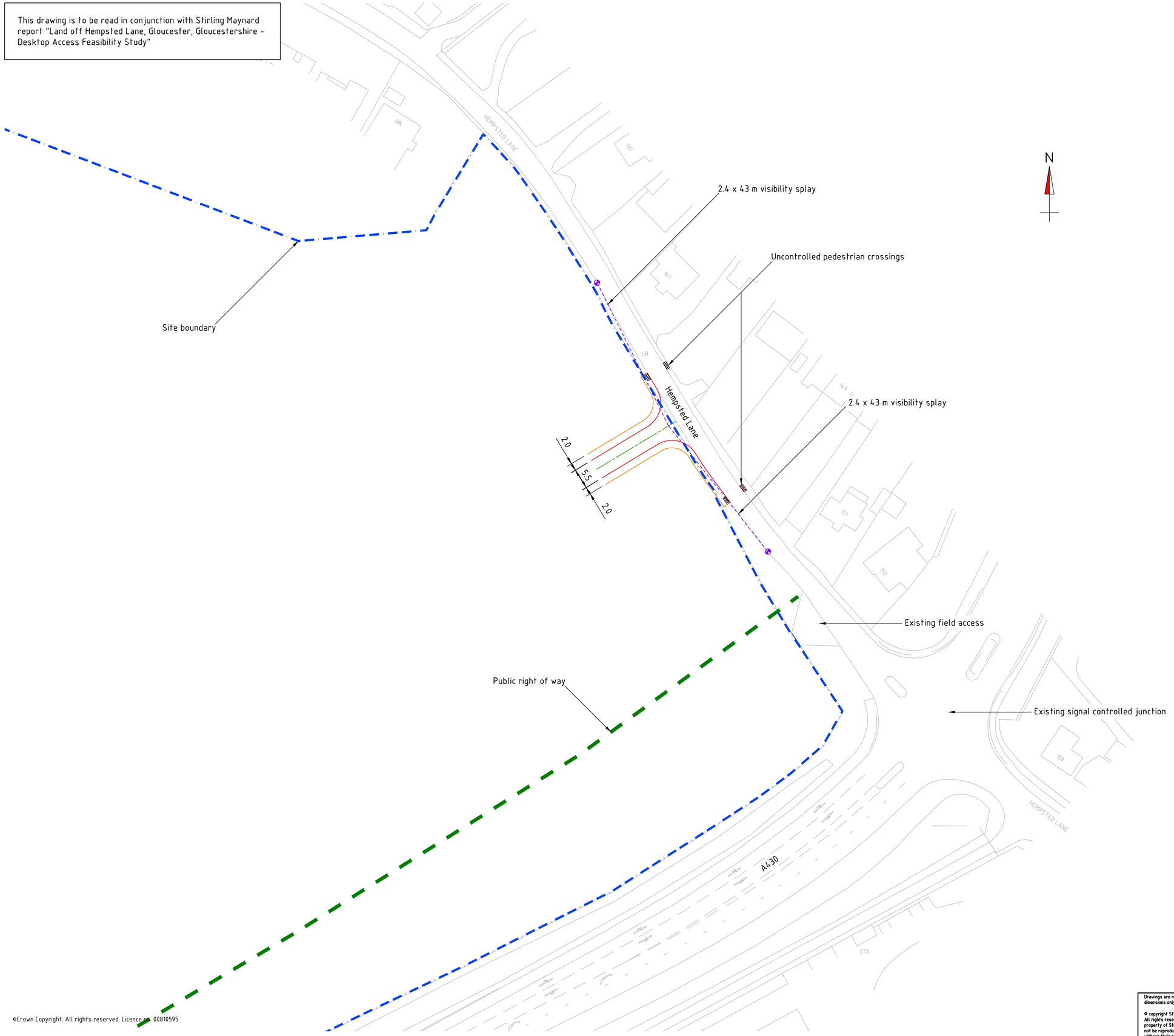
This drawing is to be read in conjunction with Stirling Maynard report "Land off Hempsted Lane, Gloucester, Gloucestershire - Desktop Access Feasibility Study"

Drawing No.
P19105-00-03

NOTES

1. All dimensions are in metres unless stated otherwise.

DESIGN INFORMATION	
Design stage	Feasibility
Description of Highway Infrastructure	Simple priority T junction
Checking Authority	County Council / Unitary Authority
Design codes	MfS
Description of Ground Conditions	Not known at this stage



Ref.	Amendment	Ch'kd	Date

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Client
GLADMAN DEVELOPMENTS LTD

Scheme Title
LAND OFF HEMPSTED LANE
GLOUCESTER
GLOUCESTERSHIRE

Drawing Title
PROPOSED ACCESS OFF
HEMPSTED LANE

Project Manager	P S SWALLOW	Drawing Status	FEASIBILITY
Drawn PSS	Scale 1:500 @ A1	Drawing No.	P19105-00-03
Checked DCA			
Date Nov 2019			

APPENDIX 3

INFRASTRUCTURE PHOTOGRAPHS


WATERS REACH


Unsuitable
for HGVs

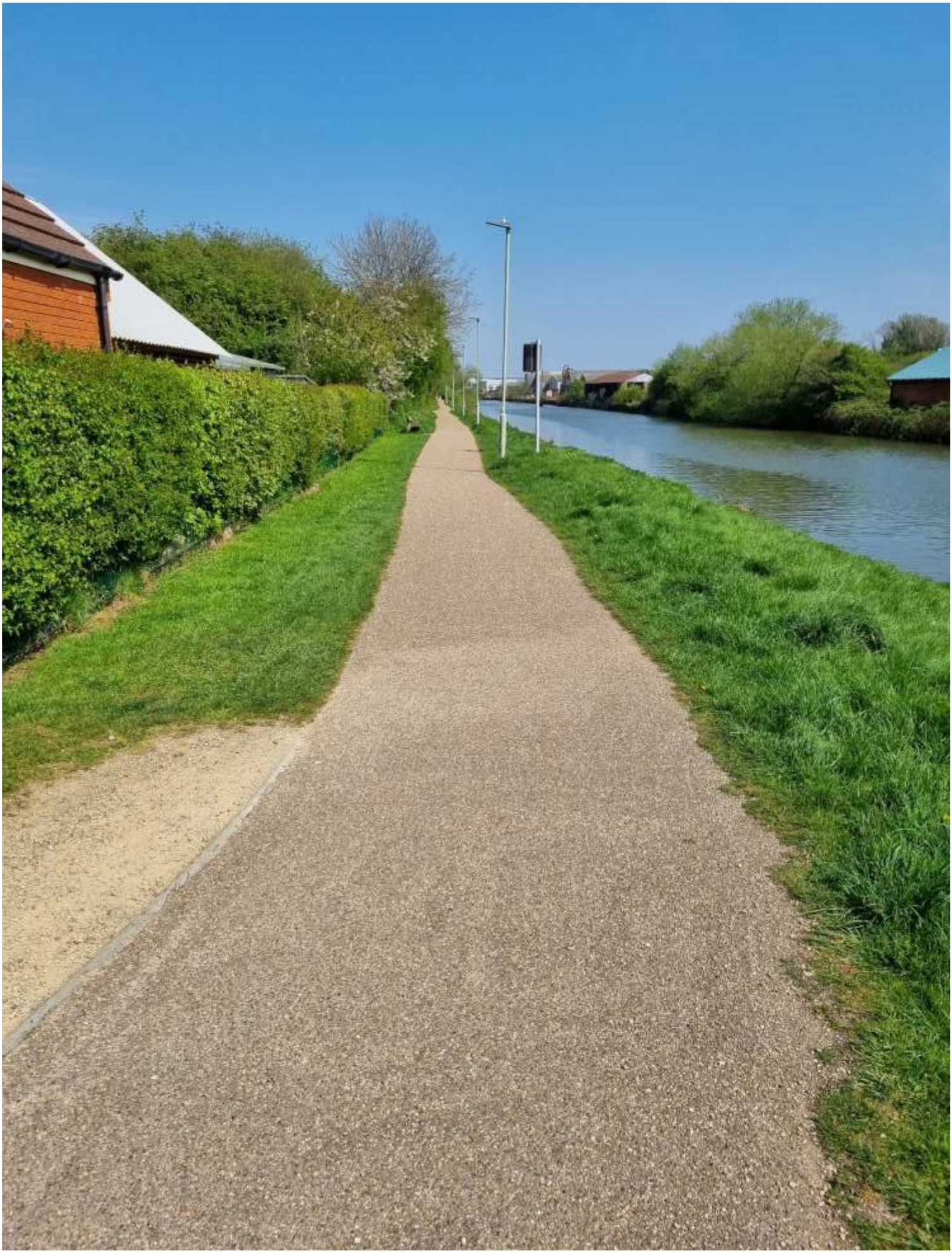

ENZ 9031
The real spirit of coffee
Served Here
rijo
midland
dry cleaners
Price List
2 Piece Suit £15.00
Suit Jacket £9.00
Trousers £8.50
Skirts from £8.50
Dresses from £12.00
Shirt from £6.75
Casual Coat from £9.50
Coat (3/4 Length) £10.00
Coat (Full Length) £12.00
Repairs
All Garments Hand Finished
Tailoring & Repair Service Available

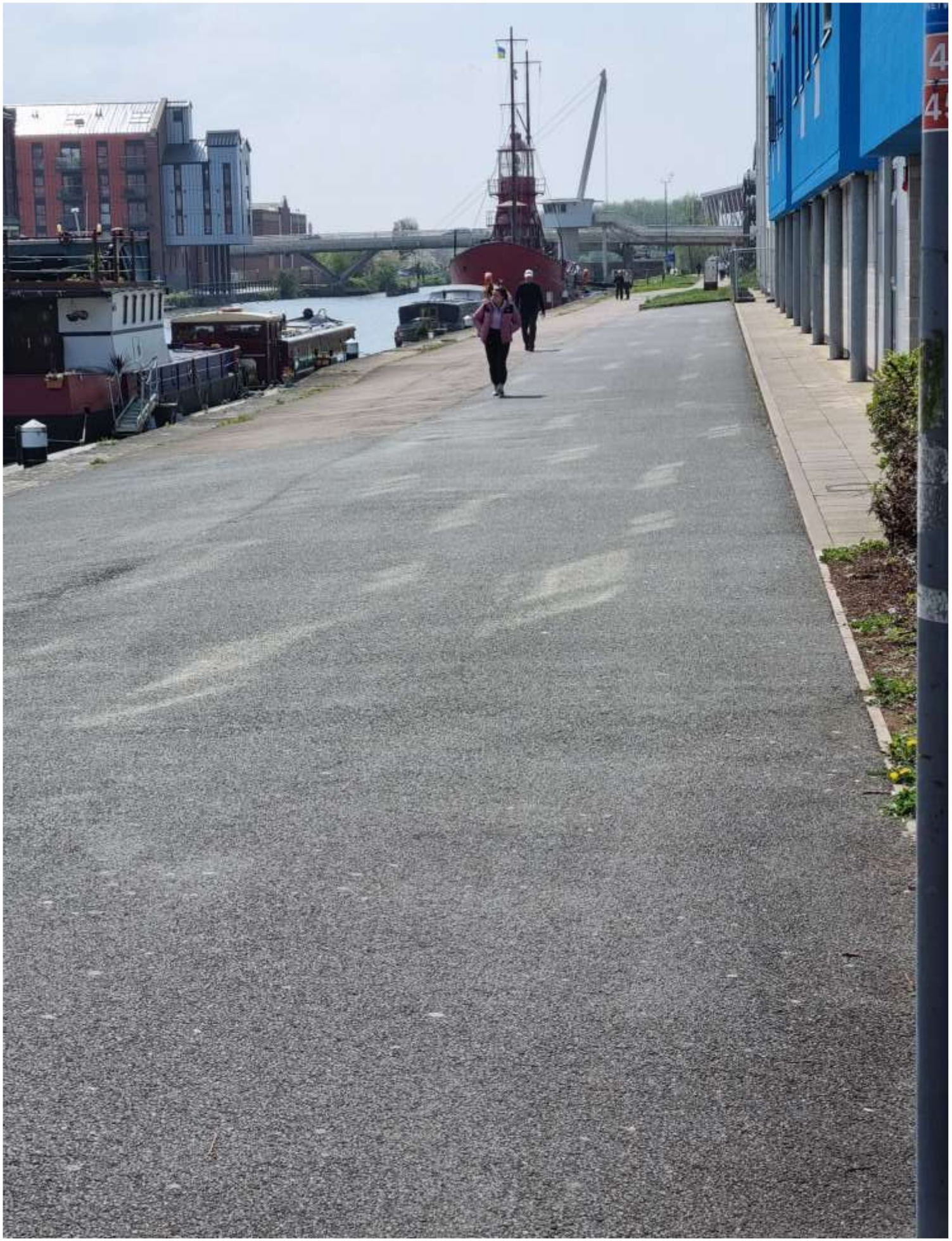

40


OILS
co.uk
lubricants direct


FX63 WTU


41
45
NATIONAL
CYCLE
NETWORK






PARLIAMENT STREET

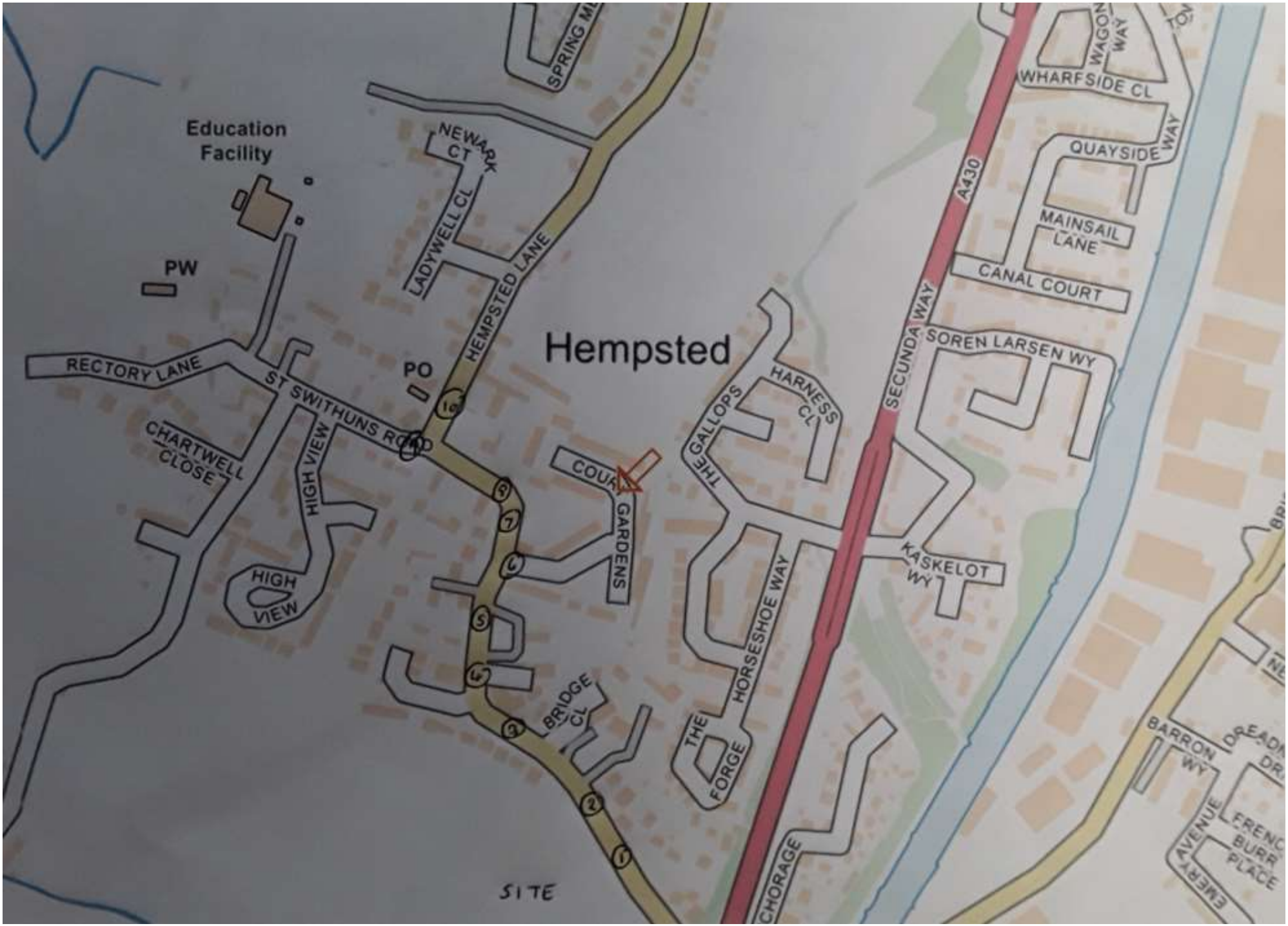


PHOTO LOCATIONS

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