

Agreement in Principle for Highway-related Departures Template

DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-01 Version 4
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Clifton Hampden Bypass (Name/Number TBD)
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	A Road
National Speed limit <i>(where applicable)</i>	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following Departure is sought:

- Departure CHB-DS-01: A reduction in overtaking sections from the CD 109 minimum of 30% to 0%.

The proposed departure above significantly reduces the amount of land-take required.

Departure Details	
Reason for departure	CD 109 Paragraph 9.2 states that the minimum overtaking value for rural S2 roads shall be 30%. Achieving this value is not possible without impacting the industrial properties and buildings, adding an exorbitant cost and programme delay to the project.
Associated Departures	None

Justification	
Justification for the departure	The need to construct the bypass without incurring substantial additional cost and programme delay is the justification for this departure. It is not possible to avoid impacting the industrial properties and buildings within the scheme extents and have the route provide 30% overtaking sections.
Mitigation measures included <i>(if any)</i>	<ul style="list-style-type: none"> - Bypass centreline to be painted with warning lines to indicate that overtaking may not be safe. - The A415 Connection priority junction will have a small physical island at the end of the right-turn lane. The B4015 Connection ghost island priority junction will have small physical islands at either end of the right turn lane. This will prevent drivers from abusing the ghost islands and right turn lanes to overtake.
Mitigation measures rejected <i>(if any)</i>	None

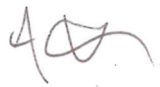
Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date:

7/4/21

Paul Fermer

If issues arise after construction further mitigation can be provided by not permitting overtaking at all and the use of double white lines.

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P04
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB CD 109	Link to CD 109	

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DEPARTURES FORM

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General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-02 Version 3
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Clifton Hampden Bypass (Name/Number TBD)
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	A Road
National Speed limit <i>(where applicable)</i>	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following Departure is sought:

- Departure D-2: Placing the westbound bus lay-by on the outside of a curve with a radius of 360m, less than the DMRB CD 169 minimum value of 720m;

The proposed departure above significantly reduces the amount of land-take required and provides enhanced connectivity for bus users, with the aim to promote alternative transportation options over private vehicles.

Departure Details	
Reason for departure	The proposed westbound bus lay-by sits on the bypass in front of the Culham Science Centre main gate. CD 169 Paragraph 3.2 specifies that for a design speed of 70 kph (posted speed of 40 mph), bus lay-bys shall not be sited on the outside of a curve with a radius of less than 720m. The proposed horizontal curve radius at this location is 360m. Increasing the horizontal radius to 720m would drastically increase the land-take required by shifting the alignment south, impacting multiple landowners. This increase to the required land-take would increase project cost and likely result in more opposition from the landowners than the current proposals.
Associated Departures	- Departure D-3

Justification	
Justification for the departure	<p>The need to construct the bypass without incurring substantial additional cost and programme delay is the justification for this departure. It is not possible to avoid impacting the industrial properties and buildings within the scheme extents and have a bus lay-by on a curve with a radius value of at least 720m.</p> <p>The second justification for the departures is to provide enhanced connectivity for non-motorised users and bus users. Oxfordshire County Council is very keen to promote active and public transportation modes as much as possible. Locating bus stops close to destinations is a key part of this strategy to make public transport a convenient and viable transport option.</p> <p>Road markings will be used to delineate the westbound lay-by from the main carriageway, and this section of road will be lit. This will help to distinguish the through lane from the lay-by.</p>
Mitigation measures included (if any)	None
Mitigation measures rejected (if any)	<ul style="list-style-type: none"> - Further reduction of the speed limit and design speed to 30mph, which is not in keeping with the objective of the route. - Moving the bus lay-bys to lower speed sideroads designed to Manual for Streets. This would result in an increased distance on the desire line, and an additional pedestrian crossing for the eastbound bus lay-by.

Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date:

7/4/21

Paul Fermer

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P04
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB CD 169	Link to CD 169	

Agreement in Principle for Highway-related Departures Template

DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-03 Version 3
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Clifton Hampden Bypass (Name/Number TBD)
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	A Road
National Speed limit <i>(where applicable)</i>	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following departure is sought:

- Departure D-3: A reduction in the spacing between the westbound bus lay-by and A415 Connection priority junction from the DMRB CD 169 minimum of 263m, to 5m.

The proposed departure above provides enhanced connectivity for bus users, with the aim to promote alternative transportation options over private vehicles.

Departure Details	
Reason for departure	<p>CD 169 Paragraph 3.7 specifies that lay-bys shall be located at least $3.75V$ metres (where V equals the design speed of the road) away from an at-grade junction or access on the same side of the road. A design speed of 70 kph results in a required spacing of 263m.</p> <p>The proposed westbound lay-by is spaced 227m from the roundabout give-way line and 5m from the A415 Connection priority junction, less than the DMRB CD 169 minimum spacing of 263m. The separation between the roundabout and priority junction is 350m; therefore, the westbound lay-by cannot sit between these two junctions and meet the 263 m separation requirement. There would need to be at least 611m between the roundabout and priority junction in order to accommodate an 85 m long bus lay-by ($2 \times 263 \text{ m} + 85 \text{ m}$). Providing this separation is not possible. Looking to the east, none of the subsequent junctions or accesses have a spacing of 611 m, therefore, moving the westbound lay-by further east will not meet the requirement. The spacing of the adjacent junctions or accesses cannot be shifted to provide at least 611 m spacing.</p>
Associated Departures	- Departure D-2

Justification	
Justification for the departure	<p>The justification for this departure is to provide enhanced connectivity for non-motorised and bus users. Oxfordshire County Council is very keen to promote active and public transportation modes as much as possible. Locating bus stops close to destinations is a key part of this strategy to make public transport a convenient and viable transport option.</p> <p>The section of the road between the roundabout and A415 Connection priority junction will be lit, reducing the risk that road users will confuse the junction and roundabout with the lay-by.</p>
Mitigation measures included (if any)	<ul style="list-style-type: none"> - Speed limit at the west end of the scheme has been reduced from 60mph to 40mph with the aim to reduce vehicle speeds and create a more friendly mixed-modal transportation environment.
Mitigation measures rejected (if any)	<ul style="list-style-type: none"> - Further reduction of the speed limit and design speed to 30mph, which is not in keeping with the objective of the route. - Replacing the proposed lay-by with an on-carriageway bus stop, which would eliminate the issue of confusion between the lay-by and adjacent junctions. An on-carriageway bus stop would increase the risk of conflict between a vehicle attempting to pass around a waiting bus and an on-coming vehicle in the eastbound offside traffic lane. - Moving the bus lay-bys to lower speed sideroads designed to Manual for Streets. This would result in an increased distance on the desire line, and an additional pedestrian crossing for the eastbound bus lay-by.

Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date: 7/4/21

Paul Fermer

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P04
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB CD 169	Link to CD 169	

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DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor (<i>name & team</i>)	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details (<i>name & job title</i>)	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-05 Version 5
Project Details	
Road number (<i>where applicable</i>)	N/A
Road name(s) (<i>where applicable</i>)	Clifton Hampden Bypass (Name/Number TBD)
Location (<i>nearest town/ city</i>)	West of Clifton Hampden Village
Road category and type (<i>where applicable</i>)	A Road
National Speed limit (<i>where applicable</i>)	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active travel in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus operator's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following Departure is sought:

- Departure CHB-DS-05: Placing the northbound bus stop on-carriageway rather than providing a bus lay-by at the northeast end of the scheme.

The proposed departure above reduces the cost of the scheme.

Departure Details	
Reason for departure	The proposed on-carriageway bus stop sits on the bypass to the west of the B4015 priority junction. DMRB does not provide on-carriageway bus stops as a design option, therefore, according to GG101 Paragraph 2.4.1 5) a departure is required. Given that the anticipated usage of this bus stop is low (2 to 4 buses per hour in the future, with a low predicted passenger use at this location), the bus stop is proposed to be on-carriageway rather than a lay-by in order to minimize cost.
Associated Departures	- Departure CHB-DS-10

Justification	
Justification for the departure	<p>The need to construct the bypass without incurring unnecessary additional cost is the justification for this departure. The on-carriageway bus stop is anticipated to have low usage (2 to 4 buses per hour in the future, with a low predicted passenger use at this location), therefore, a lay-by is not justified given the higher construction cost required.</p> <p>The bus stop is on the outside of a horizontal curve, therefore cars wishing to overtake a stopped bus will have adequate visibility to do so.</p>
Mitigation measures included (if any)	None
Mitigation measures rejected (if any)	- Moving the bus stops to lower speed sideroads designed to Manual for Streets. This is not an option in this location due to proposed bus routing.

Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date:

7/4/21

Paul Fermer

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P02
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB GG 101	Link to GG 101	
DMRB CD 169	Link to CD 169	

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DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
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OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-06 Version 4
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Clifton Hampden Bypass (Name/Number TBD)
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	A Road
National Speed limit <i>(where applicable)</i>	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following Departure is sought:

- Departure CHB-DS-06: Placing the eastbound bus stop on-carriageway rather than providing a bus lay-by on the section of the bypass adjacent to Culham Science Centre.

The proposed departure above provides safer facilities for buses.

Departure Details	
Reason for departure	The proposed eastbound on-carriageway bus stop sits on the bypass adjacent to Culham Science Centre. DMRB does not provide on-carriageway bus stops as a design option, therefore, according to GG101 Paragraph 2.4.1 5) a departure is required. Providing a lay-by per CD 169 would be unsafe for buses and vehicles given the proposed layout, therefore, the bus stop is proposed to be on-carriageway.
Associated Departures	- Departure CHB-DS-05

Justification	
Justification for the departure	<p>Providing a bus lay-by per CD 169 in the eastbound direction would force a bus travelling toward Clifton Hampden to quickly merge over two lanes to be in the right turn lane. A bus pulling out of the lay-by could potentially merge into the left lane at the same point as a vehicle merging out of the right lane that has come off the roundabout in the right lane and intends to continue on the bypass. Providing an on-carriageway bus stop at this location removes these conflict points.</p> <p>For information, the future anticipated bus frequency at these stops is 4 to 6 per hour.</p>
Mitigation measures included (if any)	None
Mitigation measures rejected (if any)	<ul style="list-style-type: none"> - Providing an eastbound bus lay-by east of the priority junction, and an on-carriageway bus stop on the A415 Connection road (designed to MfS). This would sever the bus route and force operators to split bus routes. The bus lay-by and stop would be located an additional 180m further from the science centre, reducing the attractiveness of using the bus and potentially leading to reduced ridership.

Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date:

7/4/21

Paul Fermer

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P04
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB GG 101	Link to GG 101	
DMRB CD 116	Link to CD 116	
DMRB CD 169	Link to CD 169	

Agreement in Principle for Highway-related Departures Template

DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-07 Version 5
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Clifton Hampden Bypass (Name/Number TBD)
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	A Road
National Speed limit <i>(where applicable)</i>	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following Departure is sought:

- Departure CHB-DS-07: Varying the width of the roundabout segregated left turn lane

The proposed departure above avoids the need to regrade the existing farm access on the south side of the A415 Abingdon Road, and avoids the need to replace the existing VRS approaching the existing rail bridge.

Departure Details	
Reason for departure	<p>CD 116 Para 6.13 states that the width of the segregated left turn lane (SLTL) is governed by the minimum curve radius on the entry or exit.</p> <p>The length of the exit taper is governed by the width of the SLTL. Using a constant lane width corresponding with the upstream SLTL curve radius ($R = 34\text{m}$) results in a longer exit taper and pushes the auxiliary lane taper end to just west of the existing farm access on the south side of the A415 Abingdon Road. It is preferred to not have the farm access on a taper. This would also require the existing VRS leading up to the rail bridge to be replaced, with a new connection to the existing parapet. Connecting the VRS to this parapet is not practical from a cost and programme perspective. Reducing the SLTL width at the downstream end to correspond with the exit radius value of $R=90\text{m}$ shortens the length of the exit taper, and the auxiliary lane taper ends just before the field access, eliminating the need to regrade this existing access or replace the VRS leading to the rail bridge.</p>
Associated Departures	- Departure CHB-DS-09

Justification	
Justification for the departure	<p>Typical SLTLs as shown in CD 116 Figure 6.16 are short 90-degree left-hand bends, and it would not be practical to adjust the lane width for different curve radii. In these situations, it is logical to have the lane width governed by the minimum curve radius.</p> <p>The proposed SLTL is approximately 105m long and contains three curves. Adjusting the lane width in our situation is much more practical than in a typical SLTL design, and an adequate transition length can be provided.</p> <p>A swept path analysis has been conducted through the SLTL, and an HGV has no overrun issues.</p> <p>The SLTL width reduction is proposed to take place over the exit radius. At no point throughout the length of the SLTL will the lane width be less than specified in CD 116 Table 6.13 Column 3 for its corresponding curve radius.</p>
Mitigation measures included (if any)	None
Mitigation measures rejected (if any)	- Regrade the existing farm access on the south side of the A415 Abingdon Road. Replace the VRS leading up to the rail bridge, with a new connection to the rail bridge parapet. This is not practical from a cost and programme perspective.

Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date: 7/4/21

Paul Fermer

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P04
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB CD 116	Link to CD 116	

Agreement in Principle for Highway-related Departures Template

DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-08 Version 4
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Clifton Hampden Bypass (Name/Number TBD)
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	A Road
National Speed limit <i>(where applicable)</i>	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following Departure is sought:

- Departure CHB-DS-08: Relaxation on the stopping sight distance at the west roundabout approach

The proposed departure above avoids the diversion of multiple existing utilities that would have significant implications to the scheme cost and programme.

Departure Details	
Reason for departure	<p>The bypass design speed at the west roundabout approach is 70kph, with a corresponding desirable minimum stopping sight distance (SSD) of 120m.</p> <p>Visibility is impacted by the proposed VRS at the west roundabout approach, which is required to protect against the steep embankment hazard. An SSD value of 110m can be achieved by widening the verge to 9.5m and using an engineered embankment to avoid impacting the utilities. The minimum desirable SSD is not possible to achieve at the west roundabout approach without multiple major utility diversions, including Thames Water infrastructure and an SSE Substation.</p>
Associated Departures	None

Justification	
Justification for the departure	<p>This departure is required in order to avoid impacting the existing utilities. Diverting these utilities will cost in excess of £1m and will delay the construction programme.</p> <p>The obstruction to forward visibility is the proposed VRS. A driver's eye height is typically at least 1.05m above the carriageway surface, and most VRS systems are shorter than this. While a driver will not be able to see 0.26m above the carriageway surface at the standard 120m SSD, obstructions at eye level or higher will be visible. Therefore, drivers will be able to see the tops of cars, lorries, and other vehicles approaching the roundabout at the 120m SSD. Drivers will be able to see 0.26m above the carriageway surface at a distance of 110m.</p>
Mitigation measures included (if any)	<ul style="list-style-type: none"> - The VRS has been pushed to the maximum offset allowable without impacting the existing utilities, using an engineered embankment with an 80 degree slope.
Mitigation measures rejected (if any)	<ul style="list-style-type: none"> - Further reduction of the speed limit and design speed to 30mph (60kph), which is not in keeping with the objective of the route. This would reduce the SSD requirement to 90m, which is achievable. - Inclusion of a flashing sign warning vehicles to slow on approach to the roundabout. Drivers will see a large diagrammatic sign on approach to the roundabout, and will have an unobstructed view of the roundabout itself. A flashing warning sign is not expected to provide much additional benefit, and will result in additional cost and maintenance liabilities to OCC.

Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date:

7/4/21

Paul Fermer

If required further post construction mitigation is achievable through recution in speed and road marking warnings for example.

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P05
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB CD 116	Link to CD 116	

Agreement in Principle for Highway-related Departures Template

DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-09 Version 4
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Clifton Hampden Bypass (Name/Number TBD)
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	A Road
National Speed limit <i>(where applicable)</i>	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following Departure is sought:

- Departure CHB-DS-09: Providing a Segregated Left Turn Lane (SLTL) dedicated lane exit arrangement at a single-lane roundabout exit

The proposed departure above improves the capacity of the SLTL.

Departure Details	
Reason for departure	<p>CD 116 Paragraph 6.39 states that where only one exit lane has been provided from a roundabout, a give-way arrangement shall be provided from the SLTL.</p> <p>A give-way arrangement (CD 116 Figure 6.39) requires vehicles in the SLTL to stop and wait for a gap in traffic before exiting the SLTL, reducing its capacity. The SLTL traffic has been modelled with a give-way arrangement, and the results indicate that this arrangement does not provide the required capacity and causes queues through the SLTL.</p> <p>A SLTL dedicated lane exit (CD 116 Figure 6.27N2a) provides a significantly longer merge length and allows vehicles coming out of the SLTL to merge with traffic in the main roundabout exit, rather than having to stop and wait for a gap. This increases the capacity of the SLTL to acceptable levels.</p>
Associated Departures	- Departure CHB-DS-07

Justification											
Justification for the departure	The SLTL exit taper is 58m long, using the parameters from CD 116 Table 6.33. The auxiliary lane and lane taper lengths are 100m and 40m in length, respectively, from CD 122 Table 3.21 (merge layouts: urban road speed limit of 50mph or less). This gives sufficient length for vehicles coming out of the SLTL to find a gap in traffic and merge safely into the main eastbound lane.										
	The future year traffic flows are predicted to have relatively low flows on the main roundabout exit compared to the SLTL, as shown in the table below:										
	<table><tr><th>Peak Hour Traffic Flows 2034</th><th>AM</th><th>PM</th></tr><tr><td>Western Roundabout Exit Lane</td><td>172</td><td>508</td></tr><tr><td>Western Roundabout SLTL Exit</td><td>866</td><td>1158</td></tr></table>		Peak Hour Traffic Flows 2034	AM	PM	Western Roundabout Exit Lane	172	508	Western Roundabout SLTL Exit	866	1158
	Peak Hour Traffic Flows 2034	AM	PM								
	Western Roundabout Exit Lane	172	508								
Western Roundabout SLTL Exit	866	1158									
Given the relatively low usage of the western roundabout exit lane, it is expected that vehicles merging from the SLTL will be able to find suitable gaps to merge. The lengthened merge arrangement will further assist merging.											
The geometry of the SLTL closely follows that of the roundabout; therefore, any speed differential between vehicles exiting the roundabout and SLTL will be minimal.											
Mitigation measures included (if any)	None										
Mitigation measures rejected (if any)	None										

Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date:

7/4/21

Paul Fermer

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P04
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB CD 116	Link to CD 116	

Agreement in Principle for Highway-related Departures Template

DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Programme Lead (HIF1)
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	12 th March 2021 Departure CHB-DS-10 Version 2
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Clifton Hampden Bypass (Name/Number TBD)
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	A Road
National Speed limit <i>(where applicable)</i>	40mph proposed at the west end of the scheme 50mph proposed at the east end of the scheme
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by a public transport operator. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following departure is sought:

- Departure CHB-DS-10: A reduction in the spacing between the westbound bus lay-by and B4015 Connection priority junction from the DMRB CD 169 minimum of 319m, to 32m.

The proposed departure above provides enhanced connectivity for bus users, as well as providing a safer bus stop than the alternatives.

Departure Details	
Reason for departure	<p>CD 169 Paragraph 3.7 specifies that lay-bys shall be located at least $3.75V$ metres (where V equals the design speed of the road) away from an at-grade junction or access on the same side of the road. A design speed of 85 kph results in a required spacing of 319m.</p> <p>The proposed westbound lay-by is spaced 32m from the B4015 Connection priority junction, less than the DMRB CD 169 minimum spacing of 319m. Shifting the bus lay-by further downstream from the junction would put it on the inside of a curve, obstructing forward visibility. It would also increase the distance between the lay-by and Clifton Hampden Village, reducing the attractiveness of using public transportation.</p>
Associated Departures	<ul style="list-style-type: none"> - Departure CHB-DS-05

Justification	
Justification for the departure	<p>The justification for this departure is to provide enhanced connectivity for non-motorised and bus users. Oxfordshire County Council is very keen to promote active and public transportation modes as much as possible. Locating bus stops close to destinations is a key part of this strategy to make public transport a convenient and viable transport option.</p> <p>Neither the forward visibility nor junction visibility splay for the B4015 Connection is obstructed by the proposed bus lay-by.</p>
Mitigation measures included (if any)	None
Mitigation measures rejected (if any)	<ul style="list-style-type: none"> - Replacing the proposed lay-by with an on-carriageway bus stop, which would eliminate the issue of confusion between the lay-by and adjacent junctions. An on-carriageway bus stop would encourage dangerous overtaking manoeuvres due to the geometry of the road. - Moving the bus lay-bys to lower speed sideroads designed to Manual for Streets. Oxford Bus Company has been consulted and this option does not work for their anticipated bus route.


Response and Sign-Off

Requested departure is agreed for inclusion in the design

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 24/03/2021

Assistant Director, Environment & Place (Operations)

Signature:



Date:

7/4/21

Paul Fermer

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P05
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB CD 169	Link to CD 169	

Agreement in Principle for Highway-related Departures Template

DEPARTURES FORM

The Project Sponsor makes the following departure submission for consent / approval by the Principal Project Sponsor and the Assistant Director for Highways and Transport:

General Details	
Project Name	CLIFTON HAMPDEN BYPASS, DIDCOT GARDEN TOWN, HIF1
OCC Project Sponsor <i>(name & team)</i>	Aron Wisdom, Major Projects Development
Lead Designer details <i>(name & job title)</i>	Andrew Fox, Senior Engineer, AECOM
Highway authority name	Oxfordshire County Council
Date of submission and version number	7 th July 2021 Departure CHB-DS-13 Version 1
Project Details	
Road number <i>(where applicable)</i>	N/A
Road name(s) <i>(where applicable)</i>	Culham Science Village Access Road
Location <i>(nearest town/ city)</i>	West of Clifton Hampden Village
Road category and type <i>(where applicable)</i>	Local Road (unclassified)
National Speed limit <i>(where applicable)</i>	20mph
Summary description of existing conditions and key design issues	<p>Existing Conditions</p> <p>The existing route takes vehicles through Clifton Hampden village along the A415 Abingdon Road and B4015 Oxford Road. The A415 Abingdon Road is posted at the national speed limit to the west of the village, and the B4015 Oxford Road is posted at 50mph north/east of the village. The speed limit through Clifton Hampden village is 30mph. There exist overtaking sections on the existing A415 Abingdon Road and B4015 Oxford Road.</p> <p>Bus Route 45 connects Abingdon to the Culham Science Centre and is operated by the local bus authority. Due to the lack of a turnaround facility, the bus drops passengers outside the Culham Science Centre main gate and turns around within the science centre.</p> <p><u>View of existing A415 Abingdon Road looking east towards the Culham Science Centre. (Image from Google Earth).</u></p>



View of existing B4015 Oxford Road looking south towards Clifton Hampden Village. (Image from Google Earth).



Proposed Scheme

The Clifton Hampden Bypass is a proposed 2.3km link road connecting the A415 Abingdon Road and B4015 Oxford Road to bypass Clifton Hampden Village. The bypass diverges from the existing A415 Abingdon Road at the west end of the scheme, east of the existing rail bridge. The bypass comes into a four-arm roundabout with links to the Culham Science Centre, Culham Station, and industrial properties to the east of Culham Station. The bypass continues further east to a priority junction with a new road to link to the existing A415, an access to the Thames Water treatment plan, a proposed secondary access to Culham Science Centre, a priority junction at an existing farm track, and another priority junction to connect to the existing B4015 Oxford Road leading into Clifton Hampden village. The bypass then connects to the existing B4015 Oxford Road. The bypass will feature a shared-use pedestrian/cyclist pathway on the north side of the bypass to encourage the use of active transportation in the area. Two bus stops (one per direction) are proposed on the main bypass in front of the Culham Science Centre, in order to link the Science Centre with the local bus authority's proposed future bus routes. Two bus stops (one per direction) are proposed on the main bypass, west of the B4015 priority junction.

The proposed bypass route weaves around a number of industrial properties, including the Culham Science Centre and a Thames Water Treatment Plant. Avoiding impacting the buildings on these properties requires the use of multiple back-to-back horizontal curves with radii lower than what is acceptable for overtaking sections.

Artist's impression of the proposed bypass looking east toward the proposed Toucan Crossing in front of the Culham Science Centre (note the proposed additional eastbound lane and bus stops are not shown).



The following departure is sought:

- Departure CHB-DS-13: An increase in longitudinal gradients along the NMU routes beyond those set out in CD 195 Table E/3.9 and LTN 1/20 Table 5-8.

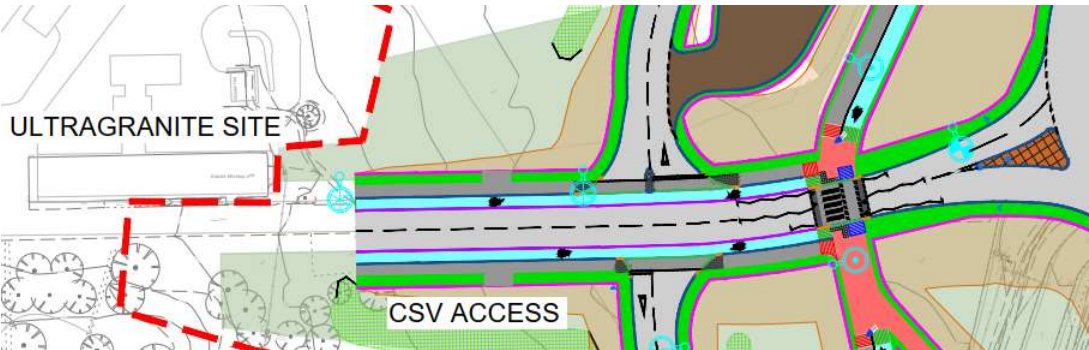
The proposed departure above is required to tie-in the CSV Access from the roundabout to the existing road, without impacting an existing building.

Departure Details

Reason for departure

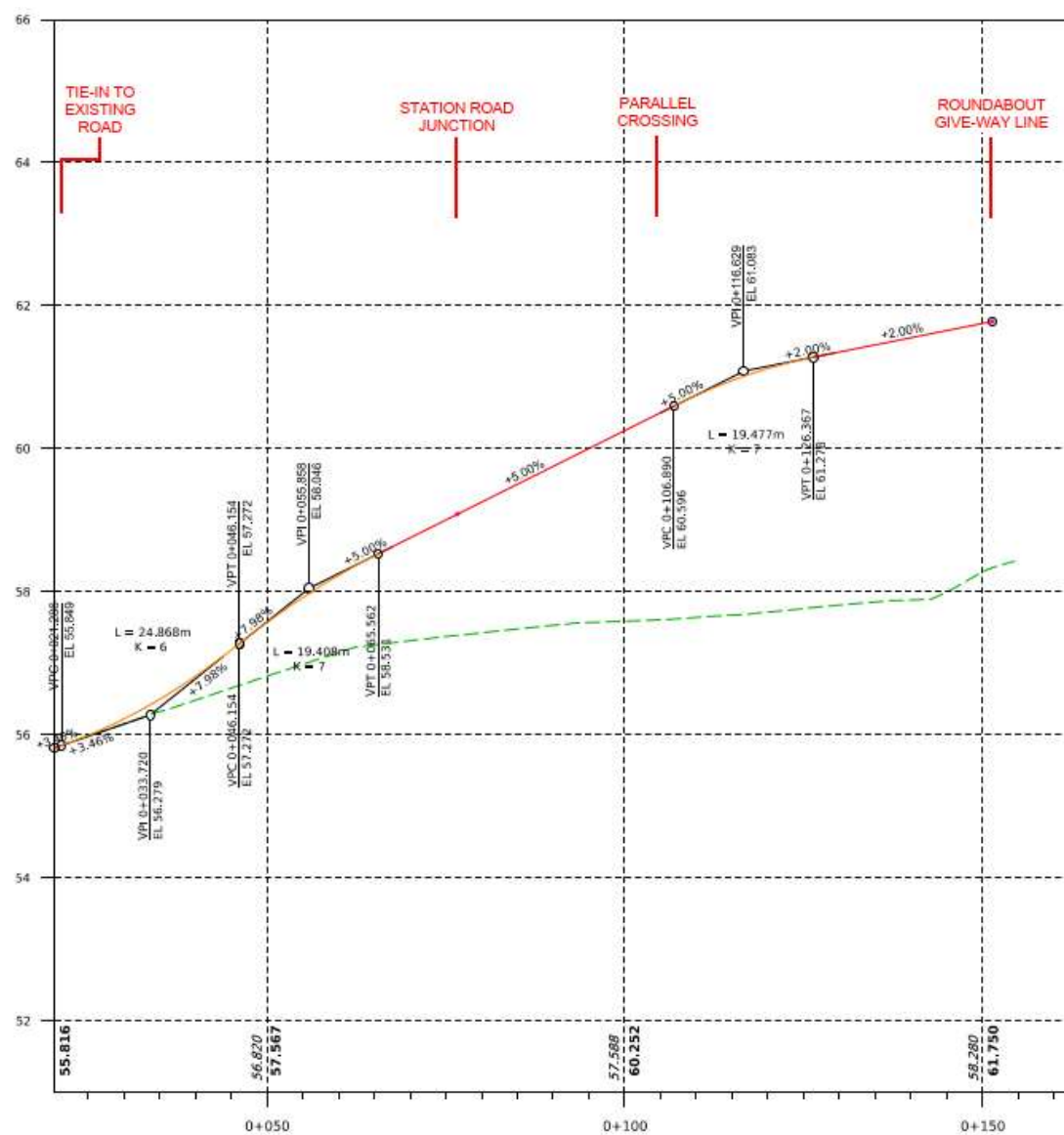
Cycle tracks have been added to the CSV Access to link with the future residential development at Culham Site No. 1. These cycle tracks link the parallel crossing to the road tie-in to existing. Figure 1 below shows the proposed CSV Access design.

Figure 1 – CSV Access Plan



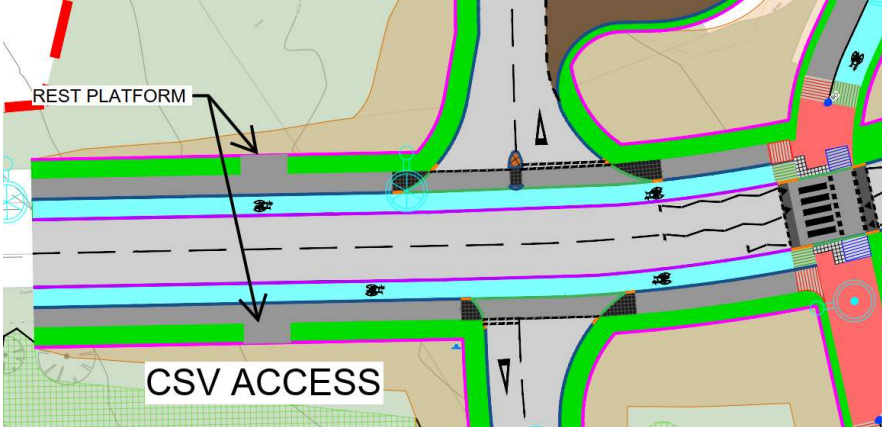
The vertical alignment for the CSV Access is shown in Figure 2 below.

Figure 2 – CSV Access Vertical Alignment



	<p>The CSV Access vertical alignment has been designed to descend from the proposed roundabout and tie-in before the existing Ultragranite building. This results in gradients steeper than recommended for cyclists per LTN 1/20 and CD 195. CD 195 Para E/3.9 NOTE 1 states steep gradients can lead to high speeds for descending cyclists or low speeds for climbing cyclists, which can create hazards for all users of the route.</p> <p>Table 1 below is extracted from CD 195 Table E/3.9 and LTN 1/20 Table 5-8.</p> <p style="text-align: center;">Table 1 – Maximum Length for Gradients on Cycle Tracks</p> <table border="1"> <thead> <tr> <th>Gradient</th><th>Maximum Length of Gradient (m)</th></tr> </thead> <tbody> <tr> <td>2.0%</td><td>150</td></tr> <tr> <td>2.5%</td><td>100</td></tr> <tr> <td>3.0%</td><td>80</td></tr> <tr> <td>3.5%</td><td>60</td></tr> <tr> <td>4.0%</td><td>50</td></tr> <tr> <td>4.5%</td><td>40</td></tr> <tr> <td>5.0%</td><td>30</td></tr> </tbody> </table> <p>The cycle tracks follow a 5% gradient for 43m between the parallel crossing and the Station Road junction. Northwest of the Station Road junction, the cycle track gradient increases from 5%, up to a maximum of 8%, then ties into the existing road gradient of 3.5%, as shown in Figure 2 above. This section where the cycle track gradient varies is 45m in length.</p>	Gradient	Maximum Length of Gradient (m)	2.0%	150	2.5%	100	3.0%	80	3.5%	60	4.0%	50	4.5%	40	5.0%	30
Gradient	Maximum Length of Gradient (m)																
2.0%	150																
2.5%	100																
3.0%	80																
3.5%	60																
4.0%	50																
4.5%	40																
5.0%	30																
Associated Departures	None																

Justification	
Justification for the departure	<p>The justification for this departure is to avoid impacting an existing building which is out of the project scope. The roundabout level is fixed at this stage of design due to utilities and tie-ins with existing road levels, and will be reviewed at detail design.</p> <p>The cycle tracks are separated from the pedestrian footway via kerb, therefore, there will be minimal interaction between pedestrians and slow (uphill) and fast (downhill) moving cyclists.</p> <p>This area is to be redeveloped in the future and should include additional NMU routes outside of the HIF1 scheme boundary, which would be more direct to Culham Science Centre and Culham Rail Station than the route subject to this departure. Therefore, alternative routes with lower gradients are likely to be available for future residents of the development.</p>

<p>Mitigation measures included (if any)</p>	<ul style="list-style-type: none"> - Flat “rest platforms” to be added in the verges for reduced-mobility NMUs, as shown in the figure below:  <ul style="list-style-type: none"> - Reduce the level of the roundabout, potentially impacting additional critical services on the east roundabout arm. To be reviewed in detail design upon confirmation of existing service information.
<p>Mitigation measures rejected (if any)</p>	<ul style="list-style-type: none"> - Increasing the longitudinal gradient on the immediate approach to the roundabout to reduce the longitudinal gradient of the cycle track. This would result in hill-starts at the roundabout approach, leading to an increase in side-swipe collisions, and is not recommended per CD 116 Para 3.30.9. This proposal would increase the likelihood of vehicular accidents at the roundabout approach, while only marginally reducing the gradient of the cycle track. - Alternative, more meandering routes to lessen the gradient were considered, however, these would not be convenient nor direct due to the short distance of this section. They would require less direct road crossings. They would also require significant embankment works and additional land from the allocated house site.

Response and Sign-Off

Requested departure is / ~~is not~~ agreed for inclusion in the design *[delete as appropriate]*

If agreement is subject to any condition(s), provide details and rationale:

If not agreed, state ground(s):

Principal Project Sponsor Signature:



Date: 1 September 2021

Assistant Director (Operations) Signature:



Date: 3rd Sept 2021

Annex A – Schedule of submitted drawings, reports and supporting documentation

Title	Attachments	Version
Drawings <i>(relating to the departure)</i>		
CHB_PD-ACM-HGN-SW_ZZ_ZZ_ZZ-DR-CH-1001		P07
Reports <i>(relating to the departure)</i>		
none		
Supporting documentation <i>(for information)</i>		
DMRB CD 195	Link to CD 195	
LTN 1/20	Link to LTN 1/20	

