PROOF OF EVIDENCE BY TIM FOXALL

ON BEHALF OF

THE UNITED KINGDOM ATOMIC ENERGY AUTHORITY

Called In Planning Application: Corridor Between A34 Milton Interchange and the B4015 North of Clifton Hampden

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Qualifications & Experience

My name is Tim Foxall. I have been a Director of Glanville Consultants since 2014, with responsibility for the Transport & Highway Engineering departments at the company's Didcot office.

I hold a degree in Transport Planning from Oxford Brookes University. I am a member of the Chartered Institution of Highways and Transportation.

I have worked for the past 23 years in consultancy, specialising in transport planning for new developments, including the assessment of the highway impacts arising therefrom. My core work involves providing transport planning and highways advice in the context of planning applications for development.

On account of my acting for a number of landowners, site promoters and developers who have land interests along the Inquiry Scheme ('the Scheme') corridor, I have been indirectly involved with the Scheme since it was first proposed by the Applicant. As such, although I have had no direct involvement in the Scheme's development with respect preliminary or detailed design, or the preparation of the planning application, supporting documentation or materials which are the subject of this Inquiry, I have nevertheless accrued a detailed knowledge of the Scheme in the context of its impact upon my various clients' lands. I am therefore thoroughly acquainted with the Scheme.

I was appointed to act for the United Kingdon Atomic Energy Authority ('the UKAEA') in December 2023 at the time the UKAEA took Rule 6 status in this case.

The evidence which I have prepared and provided in this Proof of Evidence is true. It has been prepared in accordance with the most recent professional guidelines and the opinions expressed are my professional opinions.

1.0 Introduction and Scope of My Evidence

1.1 The scheme the subject of the inquiry is known as The Didcot Garden Town HIF roads scheme ('the Scheme') and is more fully described as:

'The dualling of the A4130 carriageway (A4130 Widening) from the Milton Gate Junction eastwards, including the construction of three roundabouts;

A road bridge over the Great Western Mainline (Didcot Science Bridge) and realignment of the A4130 north east of the proposed road bridge including the relocation of a lagoon;

Construction of a new road between Didcot and Culham (Didcot to Culham River Crossing) including the construction of three roundabouts, a road bridge over the Appleford railway sidings and road bridge over the River Thames;

Construction of a new road between the B4015 and A415 (Clifton Hampden bypass), including the provision of one roundabout and associated junctions; and

Controlled crossings, footways and cycleways, landscaping, lighting, noise barriers and sustainable drainage systems.'

1.2 Oxfordshire County Council ('OCC') is promoting the Scheme. Pursuant to Reg. 3 of the Town and Country Planning General Regulations, OCC applied to itself for planning permission for the Scheme. The application for planning permission for the Scheme was considered by OCC's Planning & Regulation Committee at a meeting on 17 and 18 July 2023. The Committee resolved to refuse the Application and to refuse to grant planning permission.

1.3 Further to the Secretary of State for Levelling Up, Housing and Communities calling-in the application, OCC's Planning & Regulation Committee met again on 27 September 2023 to, inter alia, agree what its final reasons for refusal would have been had it issued a formal Decision Notice. The Committee duly cited the following eight reasons (in summary):

Reason 1 – The Climate Change Committee's June 2023 Report to Parliament had not been properly taken into account in the application.

Reason 2 – Lack of Very Special Circumstances for the development set against Green Belt Policy.

Reason 3 – The impact of traffic on Abingdon and Didcot had not been assessed in the application.

Reason 4 – Noise impacts on Appleford.

Reason 5 – The absence of a Health Impact Assessment.

Reason 6 – The harm to landscape.

Reason 7 – The Science Bridge was not of adequate design for a gateway feature to Didcot.

Reason 8 – Conflict with policy of the Council's Local Transport and Connectivity Plan 2022-2050.

1.4 The Secretary of State has indicated four matters he particularly wishes to be informed about through the Inquiry, with the sub-text of Matter 4 '*any other matters the Inspector considers relevant*' being of pertinence to this Proof of Evidence ('my Evidence'). In this regard the Inspector has, inter alia, identified the following relevant other matter:

(1) whether the extent of traffic modelling is robust, including wider traffic impacts and consideration of Oxfordshire County Council's Local Transport and Connectivity Plan ('the LTCP')

1.5 The Inspector has also indicated that evidence will be dealt with on a 'topic' led basis, with the following being of pertinence to my Evidence:

(1) Strategic need and benefits;
(4) Transport planning; and
(6) Planning policy.

1.6 Within this context, the primary focus of my Evidence is to provide an understanding of why the Scheme is necessary in order for the UKAEA to continue to develop Culham Campus (formally known as Culham Science Centre) such that it may continue to deliver world-class, publicly funded research into fusion power, and provide globally significant commercial technology organisations and the Culham Innovation Centre with world-class science and technology floorspace within the very heart of the Science Vale and Oxfordshire Knowledge Spine.

1.7 Allied to this, my Evidence will provide context as to the current challenges in transport planning terms that surround the development of Culham Campus ('the Campus') and how these are addressed by the Scheme.

1.8 I also present evidence which explains how the Scheme complies with planning polices, so far as those, for the purposes of my Evidence, extend to matters in respect of transport planning.

1.9 To this end, my Evidence is structured as follows:

Section 2 provides the transport planning context of the Campus and deals with the current constraints posed by the local highway network to the Campus's continued development.

Section 3 deals with how these constraints are addressed by the Scheme.

Section 4 examines the relevant policy context.

Lastly, in Section 5, I provide a summary and draw conclusions.

1.10 Proofs of Evidence prepared on behalf of the UKAEA by Sir Ian Chapman and Mr Steven Sensecall are also before the Inquiry. These deal, respectively, in detail with the global importance and international significance of the UKAEA's work, and the Scheme's compliance with local and national planning policy, and hence these matters are not dealt with in detail herein and rather I draw the attention of the Inspector to the crossover between the three sets of evidence presented on behalf of the UKAEA.

2.0 Culham Campus and Current Constraints Upon Development

2.1 The Campus is located to the immediate north of the A415, some 2.5km to the east of the village of Culham and 1.4km to the west of the village of Clifton Hampden and immediately adjacent to Culham Railway Staton. The Campus is therefore located at the southern end of the Clifton Hampden bypass, one of the elements of the infrastructure package proposed as part of the Scheme. A plan identifying the location of the Campus in a sub-regional context is contained at Appendix A of my Evidence.

2.2 At present, around 2,500 – 3,000 people are employed across the Campus in a variety of scientific and support roles. As well as being the Head Quarters for the UKAEA, the Campus is also home to around 40 private companies.

2.3 In line with the UKAEA's Framework Masterplan, it is their ambition to grow the Campus through a combination of the redevelopment of existing facilities and the development of new bespoke fusion demonstration plants to support key private sector fusion companies. Salient extracts of the Culham Campus masterplan are contained within Sir Ian Chapman's Evidence and demonstrate the anticipated evolution of the Campus through to 2050, by when it is anticipated that the Campus could be home to around 5,000 employees.

2.4 It is self-evident, therefore, that notwithstanding the UKAEA's continued investment into sustainable travel initiatives and the pro-active approach it takes to development of its Campus wide Travel Plan, a copy of which is contained at Appendix B of my Evidence, the number of people employed at the Campus and therefore the number car borne trips made to the site on a daily basis is likely to continue to rise. Indeed, the traffic modelling which underpins the Transport Assessment that supports the planning application made in respect of the Scheme makes allowance for such growth, with some 56,079m^2[1] of additional floor area accounted for by 2034. Notwithstanding, the UKAEA has aspirations for the delivery of a floor area in excess of that allowed for with the Applicant's Transport Assessment (circa 20,000m^2 of additional floor space beyond that allowed for) and therefore it is clear that the number car borne trips made to the site will likely be greater than currently assumed, further underlining the requirement to ensure that the Campus can be appropriately accessed.

2.5 The constraints posed by existing railway lines and the River Thames which combine to create severance to effective movement and barriers to connectivity between homes, jobs and amenities in Didcot and the surrounding areas are well documented. These barriers transcend all modes of travel and thus are not unique to private vehicles, public transport or non-motorised modes.

2.6 High levels of congestion are evident on the A4130, on the existing river crossings between Didcot and Culham/Clifton Hampden, and within Clifton Hampden, which as noted in paragraph 2.1 above, lies to the immediate east of the Campus. As well as delaying private vehicle trips, the existing queueing and delay gives rise to inconsistent journey times by bus, which in turn is a disincentive to their use and hence patronage is not as high as it might otherwise be.

[1] Table 5.2, Didcot Garden Town Housing Infrastructure Fund (HIF1) Transport Assessment, AECOM, September 2021

2.7 Morning and evening peak hour traffic data for existing junctions within the vicinity of the Campus, as obtained from the Didcot Paramics Microsimulation model, has been variously presented in documents that support the Scheme. Most recently, such is presented in the Applicant's Statement of Case and the Technical Note prepared by AECOM in response to the Inspectors request at the Pre-Inquiry Meeting for there to be a response to the concerns raised by POETS (Planning Oxfordshire's Environment and Transport Sustainably) in their letter dated 4 November 2023.

2.8 Utilising the 2020 base traffic flows from the Paramics model, AECOM, on behalf of the Applicant has undertaken junction capacity assessments at a number of existing junctions in the vicinity of the Campus. The results of these assessments reveal the extent of existing capacity constraint on the local highway network. Appendix C of my Evidence presents a map which identifies the location of the Campus in the context of the study area adopted in the Transport Assessment that supports the Scheme and identifies all those junctions that have been subject to capacity assessment and testing.

2.9 Those junctions identified with the prefix 'OFF' are existing junctions, whilst those identified with the prefix 'SCH' are those proposed to be delivered by the Scheme. The Scheme Transport Assessment identifies[2] that the following existing junctions are operating over capacity in either, or both the 2020 morning and evening peak hours:

- Ref: OFF3 – A4130 signalised junction with Milton Gate;
- Ref: OFF5 – A4130 roundabout with Basil Hill Road and Milton Road (Power Station);
- Ref: OFF6 – A415 signalised junction with High Street;
- Ref: OFF7 – A415 signalised junction with B4015 Oxford Road;
- Ref: OFF9 – B4493 priority junction with Foxhill Road;
- Ref: OFF10 – B4016 Appleford Road priority junction with Abingdon Road;
- Ref: OFF11 – A415 signalised junction with Tollgate Road;
- Ref: OFF12 – A4130 priority junction with Lady Grove; and
- Ref: OFF13 – Lady Grove priority junction Sires Hill.

2.10 Of particular pertinence to the Campus are those junctions with prefixes 'OFF6', 'OFF7', 'OFF10' and 'OFF11' which lay to the east and west / southwest of the Campus respectively, and in part control flows over the two existing river crossing located at Clifton Hampden and Culham.

2.11 The results of the capacity assessments of the various existing junctions assessed within the Applicant's Transport Assessment are set out in paragraphs 3.5.12 – 3.5.37 thereof and demonstrate the various degrees of operational constraint currently being experienced.

2.12 In order to help demonstrate just how acute the matter of lack of network capacity is in the context of the Campus's location, copied overpage is an extract from the Applicant's Transport Assessment demonstrating the existing operating conditions for junctions 'OFF6' and 'OFF7', the signalised junctions to the east of the Campus, within the village of Clifton Hampden.

2.13 The performance of the signalised junctions has been assessed by considering the Degree of Saturation (DoS) for each of the approach arms. A DoS value of 90% or below indicates that a junction arm is operating within its design capacity. A DoS value of 90% to 100% indicates that the approach is operating above its design capacity but within theoretical capacity, while a DoS value of 100% or more indicates that the arm is operating above its theoretical capacity where significant queuing and delays may occur.

[2] Table 3.4, Didcot Garden Town Housing Infrastructure Fund (HIF1) Transport Assessment, AECOM, September 2021

2.14 The modelling results also present the Mean Max Queue (MMQ) in Passenger Car Units (PCU's), along with the Practical Reserve Capacity (PRC) for both the AM and PM peak hours.

Table 3.9: Operation of Clifton Hampden Signalised Junction (OFF 6 & OFF 7)

Approach & Movement	AM		PM	
	DoS (%)	Queue (PCUs)	DoS (%)	Queue (PCUs)
A415 Abingdon - Ahead Right Left	194.0%	149	175.7%	185
Internal Junction link Eastbound - East Ahead Left	62.6%	2	54.3%	2
A415 Burcot - Ahead Right	307.1%	173	335.8%	194
Internal Junction link Westbound - West Ahead Left Right	57.1%	6	51.8%	7
High Street - Right Left Ahead	151.4%	106	159.7%	62
Watery Lane Plough Inn - Left Right Ahead	0.0%	0	0.0%	0
B4015 Oxford Road - Left Right	107.6%	19	138.2%	62
Cycle Time	90 seconds		90 seconds	
PRC	-241.2%		-273.1%	

3.5.21 The results above indicate the junction operates above capacity in both the AM and PM peak hours, with PRCs of -241% and 273% respectively and significant queues reported on the A415 and High Street. The maximum DoS reported is 335.8% on the A415 Dorchester East approach in the PM peak hour.

Source: Didcot Garden Town Housing Infrastructure Fund (HIF1) Transport Assessment, AECOM, September 2021

2.15 It is clearly evident from the table above, and its concluding paragraph 3.5.21, that the junctions are currently heavily congested at peak times, with DoS well in excess of the targeted 90%, long queues and significant negative reserve capacity. As such, it is abundantly clear that the junctions cannot accommodate the scale of planned growth within the adopted Development Plans or that planned by the UKAEA at the Campus.

2.16 Turning to junctions 'OFF10' and 'OFF11' which lay to the west and southwest of the Campus and to the immediate east of the village of Culham, copied overpage is a further extract of the Applicant's Transport Assessment which presents the existing operational capacity of these junctions. The same parameters for assessing capacity have been applied as those used for 'OFF 6' and 'OFF7'.

Table 3.12: Operation of Tollgate Road / Abingdon Road Junctions (OFF 10 & OFF 11)

Approach & Movement	AM		PM	
	DoS (%)	Queue (PCUs)	DoS (%)	Queue (PCUs)
A415 / Tollgate Road Junction Signals				
Abingdon Rd (E) - Ahead Left	67%	8	103%	37
Tollgate Road – Right Left	110%	38	99%	16
Abingdon Rd (W) - Ahead Right	100%	28	92%	10
Culham Bridges Signals				
Culham Bridges Northbound - Ahead	110%	51	94%	20
Culham Bridges Southbound – Ahead	49%	11	93%	24
Appleford Road / Abingdon Road Priority Junction				
Appleford Rd (E) – Right Ahead	14%	0	13%	0
Appleford Rd (W) – Left Ahead	30%	0	33%	0
Abingdon Road – Left Right	29%	7	46%	18
Cycle Time	154 / 111 seconds		154 / 111 seconds	
PRC (over all lanes)	-22.3%		-14.1%	

3.5.29 The results above indicate that the network is operating over capacity in both the AM and PM peaks, with PRCs of -22% and -14% respectively. In the AM peak long northbound queues are shown to occur at the Abingdon Road/Tollgate Road junction and at the Culham Bridges. In the PM peak queues are indicated on Abingdon Road (E) arm of the Tollgate Road junction and at the Culham Bridges in both directions.

Source: Didcot Garden Town Housing Infrastructure Fund (HIF1) Transport Assessment, AECOM, September 2021

2.17 It is clearly evident from the table above, and its concluding paragraph 3.5.29, that the junctions are currently heavily congested at peak times, with DoS well in excess of the targeted 90% on a number of approaches, queueing and negative reserve capacity. Again, it is clear that the junctions cannot accommodate the scale of planned growth within the adopted Development Plans or that planned by the UKAEA at the Campus.

2.18 Both living and working locally to the Scheme and having regularly driven through the junctions cited above and those referred to more widely within the Applicant's submissions, I have no doubt that the results accurately present the current operational constraints experienced across the highway network local to the Campus and hence I have no concerns that the AECOM assessment is in any way deficient or that the existing background conditions have been misreported.

2.19 Three of the four junctions detailed above ('OFF 6', 'OFF7' and 'OFF11') are traffic signal controlled, while 'OFF10' operates as a simple priority 'T'-junction. By virtue of their locations, they are bounded by existing historical development and / or other physical constraints. This is evidenced by the photographs at Appendix D of my Evidence. As such, there is limited opportunity to implement meaningful changes to the layout and operation of these junctions, which may otherwise increase their capacity. Had there been such opportunity, OCC would have advanced such in order to try and address the existing identified capacity constraints.

2.20 As noted at paragraph 3.6 of the Applicant's Statement of Case, the existing capacity constraints identified at the junctions listed in paragraph 2.9 above has led to OCC, as local Highway Authority, objecting on the grounds of highway safety, capacity, convenience and sustainability to a series of planning applications in the Vale of White Horse district, for developments as modest in scale as a single residential dwelling.

2.21 Notwithstanding, the adoption by OCC's Cabinet on 22 June 2021 of the '*Releasing Development Strategy in Didcot and surrounding villages in the vicinity of HIF1 Schemes*'[3] allows some development to come forward prior to the Scheme being open for public use, based on the following requirements:

- *Development site housing build programmes/trajectories/occupations being aligned with (or after) the delivery of HIF 1 which will require occupation thresholds/controls on development sites.*
- *Development sites to provide agreed sustainable/active travel infrastructure at the beginning (early occupations) of development sites to reduce traffic impact on the highway network prior to HIF1 delivery.*
- *New services or enhancements to existing bus service arrangements being implemented at the beginning (early occupations) of development sites.*
- *Local off-site and on-site highway works to be delivered at the early stages of development to lessen the direct impact of a development site on the highway network.*
- *Travel Plans prepared and approved by the council's Travel Plan team with deliverable and monitored targets.*
- *Strategic transport/highway contributions will be sought in accordance with Regulation 122 and the three Section 106 tests.'*

2.22 Due to the diverse nature of development that is promoted in the Vale of White Horse and South Oxfordshire districts, a four-tiered approach is now used by OCC to assess development, with 'Tier 4' being relevant to the Campus:

'Tier 4: Commercial developments. It is recognised by OCC that there are significant existing and proposed commercial sites in the area that help support the local and national economy such as Culham Science Centre, Milton Park, Harwell Campus (and others). While these sites are not directly linked to releasing housing via the delivery of HIF1 they are to play an essential role in its delivery, such as providing land or delivering some elements of the highway works. While HIF1 funding has been secured and OCC is confident is delivering HIF1, Tier 4 development proposals will be assessed on their merits but will be expected to mitigate their own impact through local and site wide measures which may include providing excellent pedestrian, and/or cyclist provisions and enhanced frequent public transport service provisions to help reduce their impact in the local area before HIF1 is delivered and in the long term. Restrictions on gross floor area usage or occupation thresholds may be applied to development sites to lessen the cumulative impact on the highway network.

[3] https://www.oxfordshire.gov.uk/residents/roads-and-transport/transport-policies-and-plans/transport-new-developments/transport-development

While this tiered approach will enable some development to come forward prior to the delivery of HIF1; County Council officers will continue to monitor the operation of the highway network in consultation with the Vale of White Horse and South Oxfordshire district councils and will review this tiered approach until the delivery of HIF1.'

2.23 In order for the UKAEA to secure its most recent planning permissions[4], in line with the above adopted Strategy, various contributions have been made to enhanced public transport provision, the provision of off-site sustainable transport infrastructure and on-going active implementation of the Campus Travel Plan. In this regard, a tabulated summary of the contributions that have been made (or will be made at the appropriate time) from the applications listed at Footnote 4 is contained at Appendix E of my Evidence and demonstrates the not insignificant investment that the UKAEA has made, particularly to bus service enhancements, where just over £1m has been secured towards enhanced service provision.

2.24 Facilitated in part by the significant S106 monies already committed by the UKAEA, the existing bus services operating past the Campus have recently been enhanced.

2.25 Bus route 45 operates from Monday to Friday (except Public Holidays) and runs from Abingdon to the west of the Campus to Cowley to the southeast of Oxford, via Culham, Berinsfield and Rose Hill. The route provides one service per hour on weekdays that serve the Campus bus stops on Abingdon Road, with three services per hour provided during the morning and afternoon peaks. The first bus arrives at Culham Campus at 06:52 and the last bus departs from Culham Campus at 18:18. The bus stops within the site are accessed by two services during the morning and afternoon peaks respectively.

2.26 Bus route 95 also operates from Monday to Friday (except Public Holidays) and runs from Didcot Parkway to the Campus via Long Wittenham and Clifton Hampden. The route provides two services during the morning peak and three services provided during the afternoon peak. Buses serve both bus stops located within the site. The first bus arrives at the Guard House bus stop at 07:16 and the last bus departs from the Conference Centre bus stop at 18:45.

2.27 There is appreciably a limit to how much more the UKAEA can offer by way of off-site sustainable travel improvements and supressing private vehicle trip generation before the fundamental constraint on development, that being lack of highway capacity, becomes a barrier to the delivery of any further development across the Campus and fulfilment of its strategic masterplan.

2.28 Indeed, the historical nature of the local road network that surrounds the Campus is such that there is limited opportunity for direct travel south towards Didcot, with such trips having to be made across either the Culham river crossing or the Clifton Hampden river crossing, both of which are traffic signal controlled and operate with one-way shuttle working which significantly reduces their operational capacity. Beyond the bridges and to the south of the river, the onward routes are circuitous, taking in the villages of Long Wittenham and Sutton Courtenay respectively.

2.29 As noted above, this results in there being a limited existing bus service between the Campus and destinations south of the river owing to difficulties with respect reliability of journey time caused, principally, by existing levels of congestion.

2.30 Furthermore, there are no segregated cycle routes south of the A415 leading to Didcot and the surrounding villages.

[4] Building C4 (OAS) - P17/S4193/FUL. Building B1 (RACE Extension) - P19/S0355/FUL. NFTP - P19/S2198/FUL. OAS (Phase 3) - P21/S1384/FUL. CCPD - P21/S1257/FUL. FDP - P22/S1410/FUL.

2.31 Consequently, it is appreciably difficult to achieve a meaningful modal shift to more sustainable modes of transport for those working at the Campus, which may otherwise allow a greater release of development (in line with the 'Releasing Development Strategy') ahead of the Scheme being delivered.

2.32 Indeed, reference to Figure 3 of the Campus Travel Plan (see Appendix B of my Evidence) reveals the typical daily modal split of travel to the Campus as at 2019 and shows that only 1.2% of visitor and commuter trips made to the Campus were undertaken by bus, 7.8% by bicycle and 10.4% by train and on foot.

2.33 It is clear, therefore, that although the County Council's 'Releasing Development Strategy' is helpful in allowing some modest development to be realised both at the Campus and more widely across the Vale of White Horse and South Oxfordshire districts prior to the delivery of the Scheme, it is considered very unlikely, if not impossible, that the provisions of Tier 4 are sufficient to allow the full realisation of the Campus masterplan and hence as explored further in Section 3.0 of my Evidence, the Scheme is the only means of delivering the UKAEA's full plans for expansion.

2.34 In summary therefore, the UKAEA's view is one that I share, in so far as transport is a key constraint to further development of the Campus and for the reasons set out in Section 3.0 of my Evidence, the Scheme is fundamental to unlocking future growth both at the Campus, as well as more widely across South Oxfordshire and the Vale of White Horse districts.

3.0 How the Inquiry Scheme Addresses Current Constraints

3.1 The wide-ranging benefits of the Scheme are set out at length in Section 5 of the Applicant's Statement of Case and therefore I do not believe that it is necessary for me to repeat these within my Evidence.

3.2 However, in very simple terms and in the context of the current constraints faced by the UKAEA, the delivery of the Clifton Hampden Bypass and construction of a new road between Didcot and Culham (which includes a new crossing of the Thames) would provide direct relief to those junctions identified in paragraph 2.9 of my Evidence as presenting immediate constraints to the future development and expansion of the Campus, as well as the delivery of the planned growth as set out in the adopted Development Plans.

3.3 The proposed Clifton Hampden bypass mitigates junctions 'OFF6' and 'OFF7' by diverting traffic away from the historic core of Clifton Hampden village, whilst the new road between Culham and Didcot will divert traffic away from 'OFF10' and 'OFF11', and the currently constrained historic river crossings at Culham and Clifton Hampden, which as noted previously, are both traffic signal controlled and operate with one-way shuttle working which significantly reduces their operational capacity.

3.4 The Transport Assessment which accompanies the Scheme planning application sets out the capacity of those junctions within the study area (i.e. those identified on the drawing contained at Appendix C of my Evidence) in a 'with HIF1' scenario, demonstrating that they all operate either within capacity following completion of the Scheme, or materially better than in a 'without HIF1' scenario. The results of the capacity assessments that were undertaken of the various junctions assessed within the Applicant's Transport Assessment in the 'with Scheme' scenario are set out in paragraphs 6.8.1 – 6.8.40 thereof and demonstrate the various degrees of forecast operational capacity arising once the Scheme is operational.

3.5 In order to help demonstrate the scale of mitigation which arises in a 'with Scheme' world at those junctions in the immediate vicinity of the Campus, copied overpage is an extract from the Applicant's Transport Assessment demonstrating the future operating conditions for junctions 'OFF6' and 'OFF7'.

3.6 The Applicant has undertaken two future year assessments; one in 2024 and one in 2034. Given that the UKAEA's masterplan looks to a 'mid-term' horizon year of 2035 and 'long-term' horizon year of 2050, it is considered appropriate to only present herein the results relating to 2034.

Table 6.27: Operation of Clifton Hampden Signalised Junction (OFF6 & OFF7) - 2034

Movement	Without HIF1				With HIF1			
	AM		PM		AM		PM	
	DoS	MMQ	DoS	MMQ	DoS	MMQ	DoS	MMQ
A415 Abingdon Ahead Right Left	345.5%	405.4	273.4%	410.1	29.0%	1.3	34.4%	1.6
Internal Junction link Eastbound East Ahead Left	58.7%	2.1	51.5%	1.9	31.0%	0.7	18.0%	0.6
A415 Burcot Ahead Right	635.7%	446.4	385.9%	455.2	39.8%	1.9	87.6%	7.2
Internal Junction link Westbound West Ahead Left Right	58.4%	6.5	69.9%	7.1	18.5%	0.4	63.4%	9.4
High Street Right Left Ahead	376.2%	539.3	403.3%	406.3	80.6%	9.2	76.0%	4.5
Watery Lane Plough Inn	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0
B4015 Left Right	260.2%	198.1	281.5%	223.8	30.9%	1.7	85.7%	10.5
Cycle time	90 seconds		90 seconds		90 seconds		90 seconds	
PRC	-606%		-348%		+12%		+3%	

6.8.16 Based on the same signal timings as the 2020 model, the junction is forecast to operate above capacity in 2024 without the HIF1 Scheme, with significant queuing in both AM and PM peaks and a PRC of -270% in the AM peak. By 2034, without the HIF1 Scheme the operation of the junction would deteriorate further, with a PRC of -606% in the AM peak and -348% in the PM peak.

6.8.17 With the HIF1 Scheme there is a significant improvement in the operation of the junction. It is forecast to operate within capacity in both 2024 and 2034 with significantly reduced queues in the village.

Source: Didcot Garden Town Housing Infrastructure Fund (HIF1) Transport Assessment, AECOM, September 2021

3.7 It is clearly evident from the table above, and its concluding paragraphs 6.8.16 and 6.8.17, that the junctions are forecast to operate materially better following introduction of the Scheme than they would in a 'without Scheme' world, with significantly reduced DoS, queue lengths and positive PRC values. As such, it is clear that the Scheme offers a very clear benefit to the operation of the junctions to the immediate east of the Campus.

3.8 The same is evident in respect of junctions 'OFF10' and 'OFF11', with the salient extract of the Applicant's Transport Assessment reproduced over page, from which it is clear (and from its concluding paragraph 6.8.28), that the junctions are forecast to operate materially better following introduction of the Scheme than they would in a 'without Scheme' world, with significantly reduced DoS, queue lengths and positive PRC values. As such, it is again clear that the Scheme offers a very clear benefit to the operation of the junctions to the immediate west of the Campus.

Table 6.33: Operation of Tollgate Road / Abingdon Road Junctions (OFF 10 & OFF 11) - 2034

Movement	Without HIF1				With HIF1			
	AM		PM		AM		PM	
	DoS	MMQ	DoS	MMQ	DoS	MMQ	DoS	MMQ
A415 / Tollgate Road Junction Signals								
Abingdon Rd (E) - Ahead Left	81%	11	75%	7	78%	14	80%	16
Tollgate Road – Right Left	93%	16	78%	10	84%	11	73%	5
Abingdon Rd (W) - Ahead Right	91%	13	64%	5	70%	18	54%	7
Culham Bridges Signals								
Culham Br N/bound - Ahead	133%	109	100%	30	82%	17	45%	8
Culham Br S/bound – Ahead	65%	16	84%	16	16%	3	20%	4
Appleford Road / Abingdon Road Priority Junction								
Appleford Rd (E) – Right Ahead	26%	0	31%	0	34%	0	36%	0
Appleford Rd (W) – Left Ahead	73%	1	57%	0	39%	0	34%	0
Abingdon Road – Left Right	121%	87	85%	17	24%	3	44%	6
Cycle time	154 / 111 seconds		154 / 111 seconds		154 / 111 seconds		154 / 111 seconds	
PRC	-47.2%		-10.7%		+6.9%		+12.9%	

6.8.28 In the 'with HIF1' scenarios there is a significant improvement in network operation, with all junctions operating within capacity in both 2024 and 2034 and predicted queue lengths at a level that would not block back to adjacent junctions. The forecast PRC for all junctions in 2024 is between 24.7% and 46.5% and in 2034 it is forecast to be between 6.9% and 12.9% indicating that there will be spare capacity at these junctions with the HIF1 Scheme.

Source: Didcot Garden Town Housing Infrastructure Fund (HIF1) Transport Assessment, AECOM, September 2021

3.9 Given the above, it is the case that the Scheme materially improves the operational efficiency of the highway network local to the Campus, as well as that more remote therefrom.

3.10 The Scheme is intended to result in less reliance being placed upon existing constrained areas of the highway network, instead focusing traffic on strategic routes and away from villages such as Clifton Hampden and Culham and the results presented above and as contained within the Applicant's Transport Assessment demonstrate that this is duly achieved.

3.11 As such, although my Evidence is intended to demonstrate and underline the very clear benefits that the Scheme brings in terms of the improved operational efficiency of existing junctions local to the Campus (i.e. those that are already heavily constrained), it must be recognised that both existing and future traffic generated by the Campus will primarily use the new Scheme infrastructure in order to take access to and from the Campus. Therefore, it shouldn't be taken that my presenting of the above capacity results is an indication that growth at the Campus will simply 'backfill' the capacity improvements delivered by the Scheme, resulting in a further worsening of junction operating conditions.

3.12 Rather, it is the case that save of course for local traffic that needs to use the existing road network to access the Campus, it is anticipated that a significant proportion of Campus generated traffic will use the Scheme infrastructure. In this regard, it is the Applicant's Transport Assessment at section 6.6 which presents the forecast operating conditions of the 'SCH' junctions and which demonstrates that aside from a limited number of locations, all junctions are shown to be forecast to operate within capacity. In the limited locations where capacity is exceeded, the Applicant has presented a reasoned rationale for why this is acceptable.

3.13 As such, the Inquiry has before it the necessary technical evidence in order to be assured that the Scheme addresses the fundamental constraints of the existing highway network, not least those in the immediate vicinity of the Campus.

3.14 As noted in Section 2.0 of my Evidence, existing north-south travel between the Campus and Didcot is severely restricted by the aforementioned bridge crossings. This in turn limits the scope of bus service provision that can reasonably operate between the Campus and locations south of the River Thames, including Didcot, as well as limiting the scope for foot and cycle trips to be made on a north / south axis. Consequently, there is a limit to the amount of modal shift that can be achieved to non-motorised forms of transport, especially for those who work at the Campus but live south of the river.

3.15 Reference to Table 5.2 of the Campus Travel Plan (see Appendix B of this Evidence) reveals that rightly so, the Campus has ambitious targets for a reduction in car borne travel, with a tangible shift towards public transport, walking and cycling. For the reasons previously set out, achieving such a meaningful modal shift is restricted, in part, by the absence of convenient and direct routes south.

3.16 The delivery of the new river crossing and route between Culham and Didcot which the Scheme promotes, opens-up opportunities for the introduction of new, fast and reliable intra-urban bus services between Didcot, Culham, Abingdon and Oxford, whilst also providing increased route choice for those who wish to walk and cycle. As such, it is important to note that the Scheme should not be viewed solely as a road building scheme, rather one that also provides the opportunity to deliver improved bus services, and cycle and pedestrian connections, only following which will it be possible for the Campus to seek to fully achieve its modal shift targets.

3.17 At this juncture, it is important to consider how the Scheme will not only contribute to the on-going development of the Campus, but its wider role and strategic function in the delivery of the growth planned across South Oxfordshire and the Vale of White Horse districts, as set out in the adopted Development Plans.

3.18 In this regard, the Campus is, and perhaps uniquely so in terms of colocation, located immediately adjacent to the strategic allocation identified as STRAT9 within the adopted South Oxfordshire Local Plan. STRAT9 is identified for development to deliver approximately 3,500 new homes, with approximately 2,100 homes coming forward in the plan period.

3.19 The uniqueness comes from the fact that it is often the employment opportunities that follow the delivery of new homes. In this instance however, the reverse is true. The Campus is an established and growing employment hub which will be complimented by the development of STRAT9, resulting in a critical mass of mixed-use development which will complement one another and in so doing, contribute to both modal shift and trip suppression by virtue of the colocation of jobs and new homes, which reduces the need to travel. The Campus and STRAT9 are also the only strategic allocated sites immediately located adjacent to a mainline railway station.

3.20 The delivery of STRAT9 itself relies upon the delivery of the Scheme and hence without it, the very clear benefits that arise from the colocation of housing and jobs simply will not materialise, to the detriment not only of the Campus, but Oxfordshire more widely, by further undermining the ability of the Campus to achieve its modal shift targets.

3.21 It is therefore clear that the Scheme is a cross-boundary, strategic level solution to a series of existing identified constraints, which owing to the wide ranging impacts of the identified solution (the Scheme), requires public sector intervention, given that it cannot be readily delivered by the private sector by virtue of the need for land to be secured from a series of third parties in order to effect delivery. Any piecemeal approach which may otherwise be able to be advanced on a site-by-site basis simply wouldn't have the same level of desired, or indeed needed, impact in a timescale commensurate with the intended speed of development of the Campus and the adopted Development Plans.

3.22 The Applicant's Statement of Case sets out the rigorous scheme selection process the Council has undertaken and its robust approach to ensuring an appropriate range of options have been identified, refined and evaluated against available information in coming to the decision that the Scheme is the most appropriate solution to meet the identified needs and objectives.

3.23 This process provides clarity, surety and comfort that alternatives to the Scheme were considered and evidently found to be inferior, costly or difficult to deliver.

3.24 In summary, it is evident that the Scheme provides a strategic solution to addressing existing identified constraints across the highway network, by enhancing the connectivity between key existing and allocated housing and employment growth areas, rendering possible the delivery of further growth at the Campus and the wider planned strategic growth identified in the adopted Development Plans.

3.25 This will enable and foster innovation, research and development in the Science Vale area. Science Vale serves a cluster of innovative, high technology, research and development industries across South Oxfordshire District and Vale of White Horse District. It is one of the anchors of the Oxfordshire Knowledge Spine. The failure to deliver the Scheme would therefore be a clear impediment to the sustainable growth of the Campus, as well as the wider planned growth.

4.0 Planning Policy & Guidance

4.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that development proposals shall be determined in accordance with the adopted Development Plan unless material considerations indicate otherwise.

4.2 This section provides a summary of planning policy and guidance relevant to the determination of the Scheme so far as those policies relate to transport planning. Mr Sensecall's Proof of Evidence deals with the wider policy context of the Scheme.

4.3 However, before considering the Scheme's compliance with relevant Development Plan policies, it is necessary to first consider the validity of the Development Plans in the context of the National Planning Policy Framework. In this regard, Paragraph 108 of the Framework states that:

'Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

a) the potential impacts of development on transport networks can be addressed;
b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
c) opportunities to promote walking, cycling and public transport use are identified and pursued;
d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.'

4.4 In this regard, both the South Oxfordshire and Vale of White Horse Local Plans were examined in the context of considerable transport evidence which assessed the impact of the planned level of development. This evidence took the form of the 'Evaluation of Transport Impacts' prepared by Atkins on behalf of the Councils. As such, it is the case that transport issues were considered from the earliest stages of the plan-making process and hence the potential impacts were known prior to the plans being made.

4.5 Indeed, the impacts and proposed mitigation options having been identified led, inter alia, to the inclusion within the Development Plans of safeguarding plans to ensure that the future ability to deliver the strategic infrastructure required to realise the planned level of growth, was secured.

4.6 Through the policies set out below, the Development Plans pay due regard to the need to ensure that opportunities are taken to promote walking, cycling and public transport use and that the environmental impacts of traffic and transport infrastructure are identified, assessed and taken into account.

4.7 On this basis, I conclude that the local Development Plans have been prepared congnisent of the need to identify transport issues from the earliest stages of plan-making and are therefore in accordance with paragraph 108 of the Framework.

4.8 The policies assessed in the following paragraphs mirror those considered relevant by the Applicant in its Statement of Case, which having reviewed, I believe to be appropriate to the assessment and determination of the Scheme.

South Oxfordshire Local Plan ('SOLP') 2035

4.9 **Policy TRANS1b** ('Supporting Strategic Transport Investment') of the SOLP states that the Council will work with Oxfordshire County Council and others to, inter alia:

' i. deliver the transport infrastructure which improves movement in and around Didcot, including measures that help support delivery of the Didcot Garden Town;

ii. support measures identified in the Local Transport Plan for the district including within the relevant area strategies;

iv. support delivery of the safeguarded transport improvements as required to help deliver the development required in this plan period and beyond;

vii. support the development and delivery of a new Thames River crossing between Culham and Didcot Garden Town, the A4130 widening and road safety improvements from the A34 Milton Interchange to Didcot, a Science Bridge over the A4130 and railway into the former Didcot A power station site and the Clifton Hampden Bypass;'

4.10 In respect of Policy TRANS1b, the very premise of the Housing Infrastructure Funding that has been granted to OCC is that it is to be spent on the delivery of Didcot Garden Town Highways Infrastructure (otherwise known as HIF1).

4.11 The Scheme will provide vital transport infrastructure to reduce congestion and enable more reliable journey times, improve pedestrian and cycling connectivity, and support new employment sites and housing. It is expected that the Scheme will directly unlock 11,711 new homes and support the delivery of more than 17,000 new homes in total in the Didcot Garden Town area. These future residential areas are located across 12 separate sites in and around Didcot in South Oxfordshire and Vale of White Horse districts.

4.12 The package of works that make-up the Scheme are directly referenced in the Local Transport Plan (now the Local Transport and Connectivity Plan ('LTCP') at Appendix 1 ('LTP4 Review') thereof. Local Transport Plan 4 (LTP4) contained a set of area and route strategies, included strategies for Science Vale (Wantage, Grove, Didcot, Harwell, Milton and Culham). These strategies identified the specific schemes required to deliver LTP4. The LTCP highlights that there is ongoing work to deliver some of the schemes from LTP4, including the Scheme. A copy of the relevant extract of Appendix 1 of the LTCP is included at Appendix F of this Evidence.

4.13 Appendix 5 of the SOLP contains a series of safeguarding maps which identify the land required to facilitate delivery of various strategic highway schemes, including that subject of this Inquiry, schemes which are identified as being required to help deliver the development required in the plan period and beyond.

4.14 Finally with respect to Policy TRANS1b, sub-paragraph vii makes clear that the Council will support the development and delivery of the Scheme.

4.15 On the basis of the above, I conclude that the Scheme is entirely consistent with Policy TRANS1b of the SOLP.

4.16 **Policy TRANS2** ('Promoting Sustainable Transport and Accessibility') of the SOLP states that the Council will work with Oxfordshire County Council and others to, inter alia:

i. ensure that where new development is located close to, or along, existing strategic public transport corridors, bus and/or rail services can be promoted and strengthened in response to increases in demand for travel and freight;

iii. ensure new development is designed to encourage walking and cycling, not only within the development, but also to nearby facilities, employment and public transport hubs;

iv. support provision of measures which improve public transport (including Park & Ride), cycling and walking networks within and between towns and villages in the district;

v. support, where relevant, sustainable transport improvements in the wider Didcot Garden Town area and in and around Oxford, particularly where they improve access to strategic development locations;

vi. promote and support improvements to the transport network which increase safety, improve air quality, encourage use of sustainable modes of transport and/or make our towns and villages more attractive;

4.17 The delivery of the Scheme is designed to improve active and sustainable travel; it is not a road scheme simply to support more car journeys - the intention is that improved bus services, rail services and cycle and pedestrian connections will be provided alongside the road construction programme as part of a wider package of S106 measures linked to the proposed growth in housing and employment.

4.18 The employment development at the Campus which the Scheme can 'unlock', along with the adjacent STRAT9, will in itself generate monies through S106 to allow further enhancement to sustainable travel options, further supplementing for example the already considerable investment in public transport as set out at paragraph 2.23 of my Evidence.

4.19 In this respect, although the Campus is not currently located on what might be regarded as a strategic or premium public transport corridor with quarter hourly services throughout the day, the Scheme offers the opportunity to materially enhance public transport provision serving the Campus by opening up strategic routes between Culham, Didcot, Abingdon and Oxford which will offer material, sustainable transport improvements in the wider Didcot Garden Town area and in and around Oxford, unaffected by the impact on journey times caused by the current queueing experienced on the local highway network.

4.20 This will in turn allow bus services to be promoted and strengthened in response to what will be inevitable increases in demand for travel which arise not only from expansion of the Campus, but its colocation with the STRAT9 residential allocation and in so doing, help to meet the ambitious targets for modal shift outlined in the Campus Travel Plan as set out at paragraph 3.14 of my Evidence.

4.21 The Scheme has been specifically designed to encourage walking and cycling through the provision of segregated pedestrian and cycle facilities and associated crossing points which will not only improve access along existing commuter routes to the Campus, but also open up new routes which will offer tangible opportunity for modal shift away from the private car to more sustainable modes of transportation.

4.22 These factors combine to promote and support improvements to the transport network which increase safety, improve air quality and encourage use of sustainable modes of transport.

4.23 On the basis of the above, I conclude that the Scheme is entirely consistent with Policy TRANS2 of the SOLP.

4.24 **Policy TRANS3** ('Safeguarding of Land for Strategic Transport Schemes') of the SOLP states that land is safeguarded to support the delivery, inter alia, of the following identified transport schemes which collectively make up the Scheme:

'Clifton Hampden bypass
A new Thames River crossing between Culham and Didcot Garden Town
Science Bridge, Didcot
A4130 road safety improvements'

4.25 The Policy goes on to note, inter alia, that:

'5. As the options for the schemes progress, the impact of the schemes will be subject to thorough assessment. This will include full environmental and archaeological assessments working in association with the relevant statutory bodies. Where schemes are located in areas of Flood Zones 2 and 3, a flood risk sequential test and the exception test should be undertaken as part of the appraisal process.

4.26 As noted in paragraph 4.13 of my Evidence, the land required for the delivery of the Scheme is safeguarded through the SOLP and indeed where the Scheme falls within the jurisdiction of Vale of White Horse District Council, the required land is duly safeguarded with the Vale of White Horse Local Plan 2031.

4.27 The Scheme planning application was accompanied by an extensive and comprehensive technical assessment which assessed amongst other matters, the archaeological and flood risk implications of the Scheme.

4.28 On the basis of the above, I conclude that the Scheme is entirely consistent with Policy TRANS3 of the SOLP.

4.29 **Policy TRANS4** ('Transport Assessments, Transport Statements and Travel Plans') of the SOLP states, inter alia, that:

'1. *Proposals for new developments which have significant transport implications that either arise from the development proposed or cumulatively with other proposals will need to submit a Transport Assessment or a Transport Statement, and where relevant a Travel Plan. These documents will need to take into account Oxfordshire County Council guidance and Planning Practice Guidance and where appropriate, the scope should be agreed with Highways England.*

2. *Appropriate provision for works and/or contributions will be required towards providing an adequate level of accessibility by all modes of transport and mitigating the impacts on the transport network. Consideration should be given to the cumulative impact of relevant development both in South Oxfordshire and adjacent authorities, and how this links to planned infrastructure improvements. This should take into account the latest evidence base work, which, where relevant, will inform the scoping of the Transport Assessment and Travel Plan.'*

4.30 The impacts arising from the Scheme have been extensively tested and documented, most notably within the Transport Assessment which accompanied the Scheme planning application. This testing has been undertaken using the Didcot Graden Town Paramics model. Although commenting on the detail of the traffic modelling and Transport Assessment is beyond the scope of my Evidence, it has in my view nevertheless fully addressed point 1 of Policy TRANS4.

4.31 As noted at paragraph 4.17 of my Evidence, the Scheme makes appropriate provision for accessibility by all modes of transport and by virtue of its fundamental purpose, has been shown to help mitigate the cumulative impact of planned growth and development in South Oxfordshire and adjacent authorities.

4.32 On the basis of the above, I conclude that the Scheme is entirely consistent with Policy TRANS4 of the SOLP.

4.33 **Policy TRANS5** ('Consideration of Development Proposals') of the SOLP states, inter alia, that proposals for all types of development will, where appropriate:

i. provide for a safe and convenient access for all users to the highway network;

ii. provide safe and convenient routes for cyclists and pedestrians, both within the development, and including links to rights of way and other off-site walking and cycling routes where relevant;

iv. be designed to facilitate access to high quality public transport routes, including safe walking routes to nearby bus stops or new bus stops;

v. provide for appropriate public transport infrastructure;

vi. be served by an adequate road network which can accommodate traffic without creating traffic hazards or damage to the environment;

vii. where new roads, pedestrian routes, cycleways and street lighting are to be constructed as part of the development, they should be constructed to adoptable standards and be completed as soon as they are required to serve the development;

viii. make adequate provision for those whose mobility is impaired;

4.34 The Scheme has clearly been designed so as to provide for safe and convenient access for all users of the highway network, including therefore providing safe and convenient routes for cyclists and pedestrians, which includes providing links to rights of way and other off-site walking and cycling routes where relevant and appropriate to do so.

4.35 As noted at paragraph 4.20 of my Evidence, the Scheme has been designed to facilitate provision of and therefore access to high quality public transport routes, including where necessary and appropriate, safe walking routes to new and existing bus stops, which includes making adequate provision for those whose mobility is impaired.

4.36 The Scheme planning application is accompanied by modelling and a Road Safety Audit which demonstrate that the Scheme can accommodate traffic without creating traffic hazards.

4.37 It is the case that the Scheme will be constructed to adoptable standards and it is the UKAEA's view that it should be completed as soon as possible to allow the effective continued development of the Campus.

4.38 On the basis of the above, I conclude that the Scheme is entirely consistent with Policy TRANS5 of the SOLP.

Vale of White Horse Local Plan ('VoWHLP') 2031 Part 1 – Strategic Sites and Policies

4.39 **Core Policy 33** ('Promoting Sustainable Transport and Accessibility') of the VoWHLP states, inter alia, that the Council will work with Oxfordshire County Council and others to:

i. actively seek to ensure that the impacts of new development on the strategic and local road network are minimised

ii. ensure that developments are designed in a way to promote sustainable transport access both within new sites, and linking with surrounding facilities and employment

iii. support measures identified in the Local Transport Plan for the district, including within the relevant local area strategies

vi. promote and support improvements to the transport network that increase safety, improve air quality and/or make our towns and villages more attractive.

4.40 As explained in Section 3.0 of my Evidence, the very purpose of the Scheme is to help ensure that the impacts of planned growth on the road network are minimised, whilst promoting sustainable transport access that links with surrounding facilities and employment sites.

4.41 By so doing, the Scheme supports measures identified in the Local Transport Plan by promoting and supporting improvements to the transport network that increase safety and improve air quality.

4.42 On the basis of the above, I conclude that the Scheme is entirely consistent with Core Policy 33 of the VoWHLP.

4.43 **Core Policy 35** ('Promoting Public Transport, Cycling and Walking') of the VoWHLP states that, inter alia, the Council will work with Oxfordshire County Council and others to:

i. encourage the use of sustainable modes of transport and support measures that enable a modal shift to public transport, cycling and walking in the district

ii. ensure new development is located close to, or along, existing strategic public transport corridors, where bus services can then be strengthened in response to increases in demand for travel

iii. ensure that new development is designed to encourage walking as the preferred means of transport, not only within the development, but also to nearby facilities and transport hubs

iv. ensure that new development encourages and enables cycling not only through the internal design of the site, but also through the provision of cycle friendly infrastructure to link the new residents with nearby services, employment areas, educational facilities and public transport hubs where interchange can be provided for longer distance travel

v. *seek to support the provision of new cycling routes where the proposals are consistent with the other policies of this plan*

vi. *ensure proposals for major development are supported by a Transport Assessment and Travel Plan, in accordance with Oxfordshire County Council guidance, and*

4.44 Core Policy 35 of the VoWHLP is very similar in the nature of its content to Policies TRANS2 and TRANS5 of the SOLP and hence for the reasons previously set out in my Evidence, I conclude that the Scheme is entirely consistent with Core Policy 35 of the VoWHLP.

Vale of White Horse Local Plan ('VoWHLP') 2031 Part 2 – Detailed Policies and Additional Sites

4.45 **Development Policy 17** ('Transport Assessments and Travel Plans') of the VoWHLP Part 2 states that, inter alia:

'Proposals for major development will need to be supported by a Transport Assessment or Statement and Travel Plan in accordance with Oxfordshire County Council guidance, including their Walking and Cycling Design Standards, and the latest National Planning Practice Guidance. The scope of the assessment should be agreed with the County Council as the highway authority, in association with the district council, as the planning authority. Highways England should also be consulted as appropriate, in accordance with Highways England guidance.'

4.46 As noted previously in my Evidence, the Scheme planning application was accompanied by a comprehensive Transport Assessment and hence my conclusion as to compliance with Development Policy 17 is the same as that with respect Policy TRANS4 of the SOLP, in so far as I consider it to be consistent therewith.

4.47 Development Policy 17 also seeks to ensure that Highways England (now 'National Highways') are consulted as appropriate and this this respect, the Inquiry has before it National Highway's initial consultation response dated 2/12/21 which recommends that conditions should be attached to any planning permission that may be granted. The key paragraph from National Highway's response is reproduced below for completeness:

'National Highways have reviewed the submitted information and it is not considered that the proposals would result in a severe impact on the SRN. To ensure this is the case, National Highways require the Applicant produces a Construction Environment Management Plan (CEMP) to ensure that the development is acceptable in planning terms. National Highways request that any further development in regard to the CEMP and existing framework construction impact section in the Transport Assessment document is communicated to us in a timely fashion.'

4.48 On the basis of the above, I conclude that the Scheme is entirely consistent with Development Policy 17 of the VoWHLP Part 2.

4.49 **Development Policy 31** ('Protection of Public Rights of Way, National Trails and Open Access Areas') of the VoWHLP Part 2 states that, inter alia:

'Development on and / or over public rights of way will be permitted where the development can be designed to accommodate satisfactorily the existing route, or where the right of way is incorporated into the development site as an attractive, safe and continuous route. Alternative routes will need to be made equally or more attractive, safe and convenient to rights of way users.

Development will not be permitted where proposals remove, narrow or materially impair the approved line of the Thames Path or Ridgeway National Trails, key connecting routes, and / or public access to them.'

4.50 From a review of the Scheme drawings, it is my considered view and understanding that the Scheme either preserves or enhances existing Public Rights of Way and where extinguishment is proposed, reasonable and viable alternatives, which are often of a higher standard than the existing provision are proposed in their place. The Scheme preserves the approved line of the Thames Path.

4.51 On the basis of the above, I conclude that the Scheme is entirely consistent with Development Policy 31 of the VoWHLP Part 2.

Local Transport and Connectivity Plan 2022-2050

4.52 Local Transport Plans are statutory documents, required under the Transport Act 2000. OCC refer to theirs as the Local Transport and Connectivity Plan (LTCP). The LTCP covers the time period to 2050.

4.53 Under the section heading '*Network, parking and congestion management*' (page 97 of the LTCP), the role of OCC as the highway and streetworks authority is set out, noting that it is responsible for a range of management functions including working to manage congestion and highways infrastructure.

4.54 Alongside managing the existing network, OCC is also responsible for overseeing the delivery of new highways infrastructure. Whilst OCC prioritise reducing car use and the need to travel, the LTCP recognises that in some cases new roads, or widening roads and junctions may be necessary, to ensure a reliable and effective transport network.

4.55 Page 105 of the LTCP goes on to note that:

'…there are examples where road schemes may be required and will deliver improvements. This includes where access is needed to new developments or where the existing road is unsafe.

….We will always require careful modelling for major schemes to ensure that the likely effects on the wider network are fully understood.'

4.56 The pre-text to Policy 36 of the LTCP notes, inter alia, that:

'Ensuring that Oxfordshire's transport network remains reliable and effective is key to supporting the local economy and everyday journeys. Some road capacity enhancements may be required to enable this.

Where appropriate, road capacity schemes will help to tackle congestion and pollution providing benefits to health and everyday journeys. It will also support the economy and ensure the county remains an attractive place to work and live.'

4.57 It is the case therefore that although the focus of the LTCP is to deliver a net-zero Oxfordshire transport and travel system by discouraging individual private vehicle journeys and making walking, cycling, public and shared transport the natural first choice, there is clear recognition that there remain instances where it is necessary to increase the capacity of the road network, to help tackle congestion and support economic growth.

4.58 As evidenced in Section 2.0 of my Evidence, the highway network in the vicinity of the Campus is already at or over capacity, with the road network unable to accommodate the level of planned growth within the adopted Development Plans, without the implementation of appropriate strategic mitigation in the form of the Scheme. This being so, notwithstanding the overall objectives and vision of the LTCP, the principle of the Scheme still aligns with the general approach to the development of Oxfordshire's movement network as set out within the LTCP.

4.59 In conclusion, I am of the view that in so far as relevant local transport policies are concerned, the Scheme is in full compliance therewith. The Scheme is policy backed and is the cornerstone of mitigation for the planned growth in the area. The Scheme does not aim to provide unlimited highway capacity for cars, or to remove all congestion; it forms part of a balanced transport strategy, which also provides high quality walking and cycling infrastructure, helping to engender modal shift to more sustainable modes.

5.0 Summary & Conclusion

5.1 The Called-in Inquiry relates to the proposed delivery of a linier series of highway infrastructure works between A34 Milton Interchange and the B4015 north of Clifton Hampden.

5.2 Oxfordshire County Council, as Planning Authority, resolved to refuse the application on eight grounds which, inter alia, included reasons related to transport and highway matters.

5.3 In response to the Inspector's suggestion that Inquiry evidence will be heard on a topic led basis, this Proof of Evidence has been prepared on behalf of the United Kingdon Atomic Energy Authority, who benefit from Rule 6 status, in order to explain why, from a transport planning perspective, the Scheme is necessary to afford the on-going development and expansion of the globally important Culham Campus.

Summary

5.4 The Campus is located at the southern end of the Clifton Hampden bypass, one of the elements of the infrastructure package proposed as part of the Scheme.

5.5 The local road network in the vicinity of the Campus is heavily constrained, with a number of local junctions, including those within Clifton Hampden, operating well in excess of their operational capacity at peak times, leading to extensive queuing and protracted journey times.

5.6 The extent of existing constraints is such that they pose a significant barrier to the continued development of the Campus.

5.7 In line with OCC's adopted 'Releasing Development Strategy', the UKAEA has made significant contributions towards bus services and off-site sustainable travel infrastructure, however the growth planned at the Campus is such that the fundamental constraint of network capacity remains.

5.8 The Scheme is intended to provide additional network capacity along a broadly north south axis between the A34 at Milton Interchange and B4015 north of Clifton Hampden, which is itself to the northeast of the Campus.

5.9 In so doing, the Scheme will deliver relief to those junctions which immediately affect the Campus, namely those within Clifton Hampden and Culham, as well as providing a further crossing of the Thames so as to remove the need to use the two existing river crossings at Culham and Clifton Hampden.

5.10 The Scheme is not, however, simply about providing additional network capacity to support more car journeys; rather it presents an opportunity to materially enhance public transport provision and provide more direct pedestrian and cycle routes.

5.11 Such will materially benefit the Campus which is currently constrained by the absence of direct routes south to Didcot and beyond. The Scheme will afford the opportunity for new intra-urban bus routes to serve the Campus from Didcot to the south, Oxford to the north and Abingdon to the west. It will also afford greater opportunity for foot and cycle trips to be made.

5.12 The Scheme is fundamental to the delivery of the adjacent STRAT9 site, which will see the delivery of some 3,500 new homes, directly collocated with the Campus, affording opportunity for modal shift and trip suppression which arises from a critical mass of mixed-use development and colocation of homes and jobs.

5.13 The Scheme meets the relevant policy tests and aligns with the County Council's Local Transport and Connectivity Plan which although seeks to reduce the overall number of car trips on Oxfordshire's roads, recognises that in some instances, new road infrastructure is necessary where access to new development is needed. In this regard, the new development is that identified in the adopted Development Plans and the extensive traffic modelling undertaken by the Applicant demonstrates that the Scheme is required to accommodate the planned level of growth and that alternatives were either ineffective, too expensive or difficult to deliver.

Conclusion

5.14 I conclude that in order for Culham Campus to continue to grow and offer a world class environment for the science and technology sector, as well as advancement of fusion technology, the Scheme is necessary to afford appropriate long-term sustainable access.

5.15 Only the Scheme can help to unlock the very real benefits that arise from the colocation of new housing in the form of STRAT9 and an established employment site.

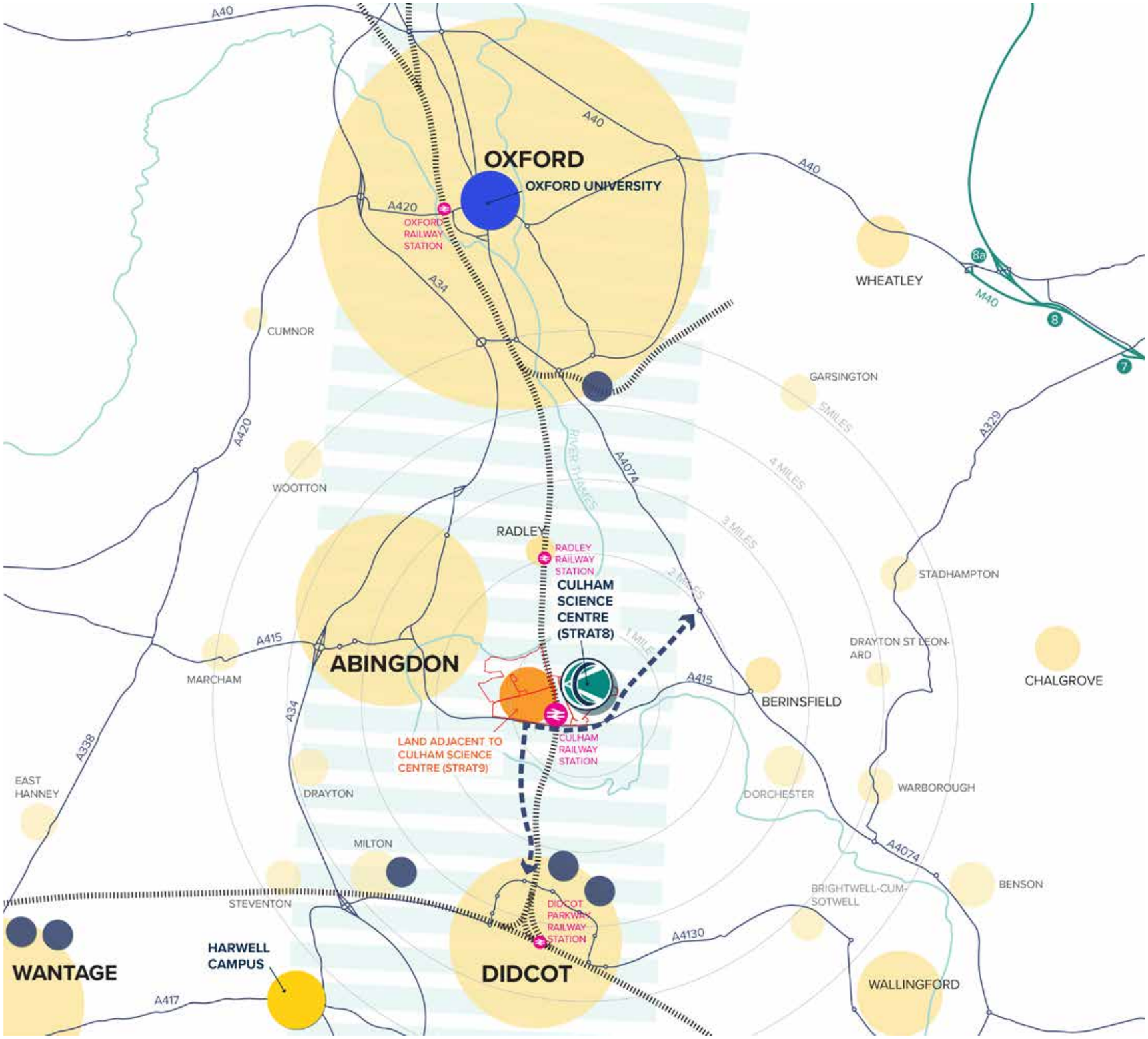
5.16 The Scheme offers wider benefits in terms of improved access by sustainable modes of travel and the associated opportunities for modal shift.

5.17 The Scheme meets the appropriate local policy tests.

Appendices

Appendix A

Culham Campus Site Location Plan



LEGEND

- Culham Science Centre (STRAT 8)
- Land adjacent to Culham Science Centre (STRAT 9)
- Main Settlements
- Harwell Campus
- Oxford University
- Oxfordshire Knowledge Spine / Innovation Corridor
- Oxfordshire's critical economic sectors, assets and growth opportunities within the innovation ecosystem as set out by OXLEP including:
  - *Culham*
  - *Motorsport Valley key sectors*
  - *Oxford Science Park*
  - *Milton Park / Didcot Garden Town*
  - *Williams Innovation & Technology Campus*
  - *Living Labs Testbeds*
- Railway lines and key stations
- Motorway
- Major Road
- Clifton Hampden Bypass and Thames Crossing now under development

Appendix B

Culham Campus Travel Plan

CULHAM
SCIENCE CENTRE

Travel Plan

June 2023

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1.0 Introduction

1.1 Culham Campus is a major centre for science and technology in Oxfordshire. **Figure 1** shows an aerial view of the Campus.

1.2 It is situated approximately 7.5 miles south of the edge of Oxford, 3.5 miles east of Abingdon-on-Thames and 6 miles north of Didcot (centre), and adjacent to Culham train station, as indicated on the regional context plan in **Figure 2**.

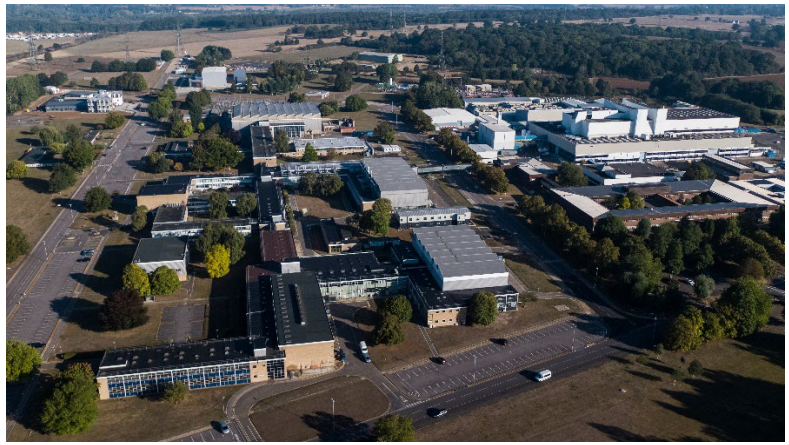


Figure 1: Aerial View of Culham Campus

1.3 In line with government policy, the United Kingdom Atomic Energy Authority ("the UKAEA"), as owner of Culham Campus, is actively encouraging an increase in the use of sustainable travel modes by implementing a voluntary site-wide Travel Plan. The UKAEA have been committed to implementing a site-wide Travel Plan for Culham Campus since 2016, and were already implementing some Travel Plan measures for many years prior to that.

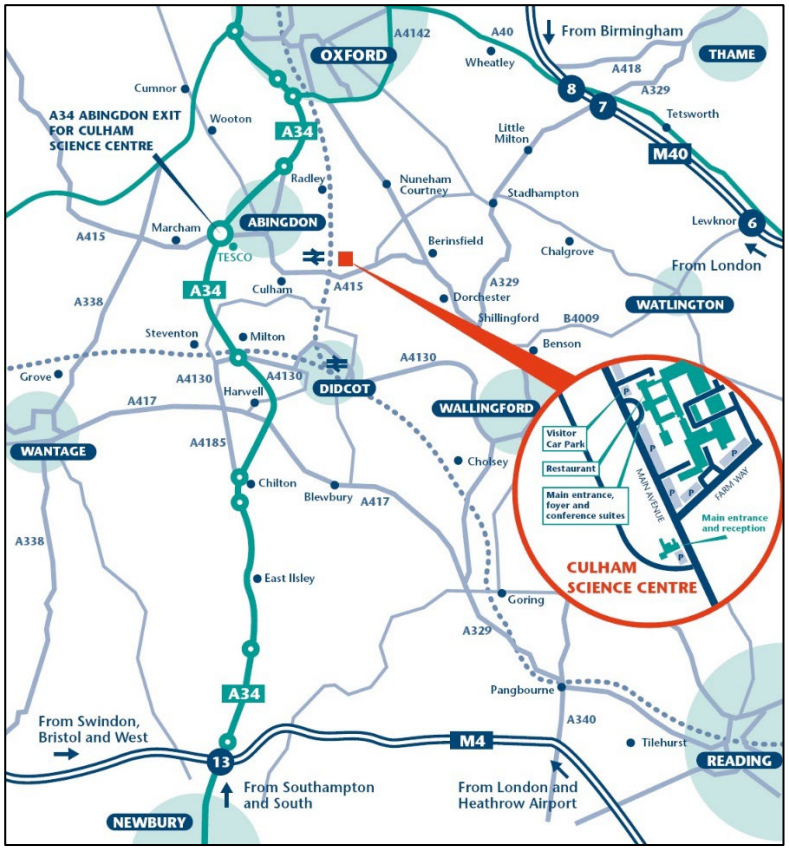


Figure 2: Regional Context Plan

1.4 There are currently around 2500-3000 employees based at Culham Campus working for the UKAEA and other resident organisations. In addition, innovative and entrepreneurial small start-up businesses are

catered for within the Culham Innovation Centre (www.culham-ic.co.uk) operated by Oxford Innovation Ltd., by providing serviced and virtual office accommodation. There are also a number of development schemes with planning permission, and ongoing Masterplan aspirations.

1.5 The South Oxfordshire Local Plan 2035 was adopted in December 2020 and removed Culham Campus from the Green Belt (Policy STRAT6) and supports the redevelopment and intensification of Culham Campus (Policy EMP1). Policy STRAT8 states that "in combination with the adjacent strategic allocation (Policy STRAT9) this site will deliver at least a net increase in employment land of 7.3 hectares (with the existing 10 hectares of the No.1 site retained but redistributed across the two strategic allocations)".

1.6 Oxfordshire County Council (OCC) adopted their Local Transport and Connectivity Plan (LTCP) in July 2022. The LTCP outlines a clear vision to deliver a net-zero Oxfordshire transport and travel system that enables the county to thrive while protecting the environment and making Oxfordshire a better place to live for all residents. It seeks to do this by: reducing the need to travel; discouraging individual private vehicle journeys; and making walking, cycling, public and shared transport the natural first choice. As part of the LTCP, OCC have adopted a 'decide and provide' approach to transport planning: decide on a preferred vision of the future and then provide the means to work towards, that whilst also accommodating uncertainty about the future. A fundamental part of implementing the 'decide and provide' approach is the need to monitor the outcomes of its implementation through the travel plans accompanying development proposals.

1.7 The UKAEA recognise the importance of achieving modal shift alongside the development of Culham Campus, in the context of other developments and infrastructure schemes in the local area. Achieving modal shift can have a significant effect on reducing traffic associated with Culham Campus as a large employment site of national importance, and managing the impact of development to facilitate economic growth.

2.0 Objectives

2.1 The key objectives of this Travel Plan are to reduce the need to travel, reduce the number of single occupancy car journeys, and increase more sustainable modes of travel.

2.2 Achieving these objectives, will directly contribute towards other targets for the UKAEA, including ambitious net zero carbon emissions targets.

2.3 The Travel Plan is also directly linked to the aspirations of the Framework Masterplan for Culham Campus which includes making significant improvements in terms of placemaking, on-site infrastructure for connectivity by active modes of travel or electric vehicles, and opportunities for improved connections to/from the train station and surrounding footways and cycleways.

3.0 Latest Survey Results and Travel Patterns

3.1 Multi-modal travel surveys are being organised for September/October 2023 and this Travel Plan will be updated following the survey work (also see Section 8.0 Monitoring and Review).

3.2 Traffic count surveys were last carried out at the junction leading to the Culham Campus on the A415, and at the entrance gate on a typical weekday in September 2019. The resulting traffic flows showing the AM and PM peak hours and 12-hour flows are illustrated on BSP Drawing 03081/C11, in **Appendix A**. In total, there were around 3,825 vehicular movements per day in and out of this access junction.

3.3 The 2019 traffic count looked at the traffic flows at the junction with the A415. There were slight differences in the number of cars associated with Culham Campus during the morning and evening peak hours and over the 12-hour period when compared to 2018 flows. The numbers of through vehicles travelling along the A415 were slight lower in both directions of travel for the AM, PM and 12-hour periods respectively.

3.4 At the same time as the traffic counts above, a multi-modal movement survey was carried out adjacent to the entrance gate to record traffic and movement trips by all modes of transport. This enabled the daily modal split values for people entering and exiting the site to be calculated, and the results are shown in **Figure 3**, from a sample size of around 4,200 movements. It should be noted that these figures include visitor and operational trips as well as commuter trips. The proportions are also set out in Section 5.0 Targets).

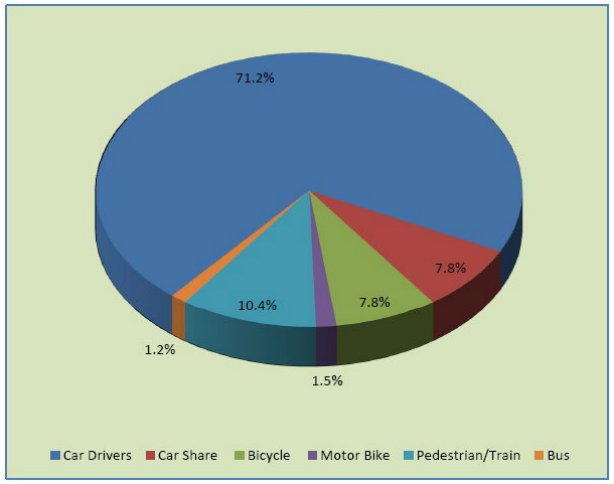


Figure 3: Culham Campus Modal Split - Typical Daily Movements 2019

3.5 The UKAEA Property Unit (UPU), now Campus Development Department, carried out a fact finding questionnaire to gain a better understanding of the businesses based at Culham. The questionnaire provided an opportunity to gather information on their awareness of sustainable transport options available such as Culham's Car Share Scheme (www.culhamcarshare.com) and the government's Cycle to Work scheme. This also confirmed that 85% of respondents were aware of Culham's Travel Plan and 14% had their own Travel Plan. This survey is due to be repeated this year, and a summary of key information will be included in the next Travel Plan update.

4.0 Opportunities and Constraints

4.1 The UKAEA have regular transport liaison meetings with OCC Highways regarding appropriate local pedestrian, cycle and public transport improvements. The UKAEA will continue to take an active role in local transportation studies and consultation with local authorities on transportation issues. Opportunities for local pedestrian and cycle infrastructure improvements and bus service improvements are also considered as part of planning applications in liaison with SODC and OCC.

Pedestrian Facilties:

4.2 Given the rural location of Culham Campus, there are unlikely to be particularly high numbers of commuter trips made to the site solely by foot. However, for those choosing to commute by bus and train, infrastructure for pedestrians is necessary to enable them to complete the final few hundred metres of their journey on foot.

4.3 Pedestrian facilities at, and immediately surrounding the site are of a good standard as a result of recent investment by the UKAEA and OCC. Facilities include footway links from Culham Campus to the bus stops on the A415 and to Culham rail station, with a good provision of street lighting.

4.4 Segregated footways lead from the northern side of the A415 Abingdon Road to the secure entrance to Culham Campus. A pedestrian crossing with central refuge/traffic island and dropped kerbs aid pedestrian access to/from the footway on the opposite side of the A415.

4.5 To the east of Culham Campus, a shared footway / cycleway is provided on the southern side of the carriageway linking to Clifton Hampden (approximately 1.3km). The shared route continues east alongside the A415 to Burcot (approximately 3km) and Berinsfield (approximately 4km).

4.6 To the west of Culham Campus, a shared footway / cycleway runs along the northern side of the Abingdon Road between the Campus access and the junction with The Burycroft (serving Culham village). A footway then continues along the Causeway, which provides a link into the centre of Abingdon-on-Thames. This footway is often used by cyclists even though it is only designated as a footpath. The pedestrian route along the A415 between Culham Campus and Abingdon covers a distance of approximately 4.75km. It is estimated that commuting by foot from Abingdon-on-Thames would take approximately 45 minutes to 1 hour.

4.7 Further destinations can also be accessed via the shared footway / cycleway running alongside the A415, as it travels between Culham Campus and Abingdon. A footway runs along the western side of Tollgate Road which provides a pedestrian link through to the village of Culham (approximately 2.9km) and continues alongside the road to the south of Culham to provide a pedestrian link into Sutton Courtenay (approximately 4.5km). Culham Train Station can also be accessed via a shared footway / cycleway running alongside the A415 and Station Road (approximately 650m).

4.8 A pedestrian controlled signalised crossing facility, including dropped kerbs and tactile paving, is situated along the A415 within Clifton Hampden, incorporated into the signalised junction with High Street. An uncontrolled crossing, featuring dropped kerbs, tactile paving and a centre refuge is situated along the A415, approximately 180m to the west of the Campus access junction. An uncontrolled dropped kerb crossing with tactile paving is also provided across the A415 at the signalised junction with Tollgate Road. Further uncontrolled dropped kerb crossings are provided across the minor arms of junctions along the A415 between Culham Campus and Abingdon; across the Station Road junctions on either side of the railway bridge, across Thame Lane and across the Rye Farm car park access to the southern edge of Abingdon.

4.9 There is also a well-established public rights of way network connecting Culham Campus with Abingdon, Clifton Hampden and other settlements within the area. The public rights of way within the vicinity of the site shown on the extract of Oxfordshire County Council (OCC) public rights of way plan included in **Appendix B**.

4.10 A restricted byway travels parallel to the northern boundary of Culham Campus. The byway provides a pedestrian and cycle link over the railway line and through to the Warren Farm access along Thame Lane (to the west of the Campus) and through the wooded areas of New Covert and Roundhill Wood to Oxford Road (to the east).

4.11 The section of the restricted byway that runs parallel to the Culham Campus boundary is part of a promoted OCC route, which also includes a footpath on the western side of the railway line. The footway travels north from the restricted byway before diverting west along the southern bank of the River Thames to provide a pedestrian link into the centre of Abingdon. The walking distance from this boundary to central Abingdon is approximately 4km.

4.12 The restricted byway also connects with a public right of way which runs parallel to the eastern boundary of Culham Campus. This footway provides a pedestrian link into the village of Clifton Hampden. The walking distance from this boundary to Clifton Hampden is approximately 450m.

4.13 The proposed Clifton Hampden bypass as part of the HIF infrastructure scheme will include a shared footway / cycleway which will run along the northern side of the route, both of the proposed new junctions providing access to the site will include shared footway / cycleway links that will tie into the proposed provision along the bypass to provide a safe, high quality access to pedestrians and cyclists travelling to and from Culham Campus.

4.14 There will be new bus stops provided on the new bypass road with pedestrian link to the main entrance to Culham Campus. There will also be a new pedestrian/cycle link to the train station.

4.15 The presence of a range of on-site amenities/services, easily accessible by foot, reduces the need for staff to leave the site during the working day.

Cycling Facilties:

4.16 The plan in **Appendix C** shows existing cycle storage and showers provided around Culham Campus, which are generally well used. The trend for the numbers of cyclists is a steady increase over the years, with 6.4% of the modal split back in 2013 rising to 7.8% in 2019. This has resulted in an ongoing investment by the UKAEA in extra bike stands. There are also repair stations at Main Gate and behind RACE.

4.17 Additional covered cycle storage and facilties for cyclist are also being provided as part of new buildings, in accordance with BREEAM and planning requirements.

4.18 Following the formation of Culham Bicycle Users Group (CulBUG) and the Cycle to Work Scheme, cycling now contributes to a significant number of trips to and from Culham Campus. CulBUG is an information and discussion forum, providing advice to cyclists and potential cyclists, and raising issues facing cyclists both on site and in the local area. Initiatives which have been implemented at Culham Campus to encourage cycling include a Bike to Work day each June, with the provision of a free breakfast for participants. The CulBUG forum has been relaunched and re-promoted this year and has planned monthly meetings. There are currently around 120 members.

4.19 The UKAEA are currently considering some improvements to the approach to the security gate for cyclists, which are likely to be included as part of the interim changes to facilitate the main gate development proposals. This would provide a clearer cycle route with additional protection for cyclists as they approach the security gate with motorised traffic.

Figure 4: Cyclists at Culham

4.20 The plan in **Appendix D** shows existing and proposed cycle routes in the vicinity of Culham Campus, and also within the Science Vale UK area as a whole. There are also cycle facilties incorporated in the HIF infrastructure scheme. An overview of the alignment of the new roads is provided in **Appendix E**.

4.21 There is shared use walking/cycling provision alongside the A415 between Berinsfield, Culham Campus and the beginning of the Causeway (east of

Abingdon-on-Thames). At this point, the off-road cycling provision finishes and the Causeway is officially accessible for people on foot only. These routes are generally unlit and are often in need of maintenance.

4.22 A cyclability audit, which was led by OCC, took place in summer 2011 with cyclists who work at Culham Campus, in order to actively involve staff and provide a user perspective. The audit confirmed the desirability of improving the existing cycle links to the Campus. Further improvements which were suggested during the cyclability audit included formalising the use for cyclists of the path to the west of the entrance which runs towards Abingdon-on-Thames, along with a new route to the east of the entrance towards Clifton Hampden and an A415 crossing facility to link this with the existing cycle route. The provision of improved entry and exit links from the Campus (as identified in the audit above) was implemented by the UKAEA, with shared pedestrian/cycle routes and signage provided.

4.23 There was a Cycle Survey Questionnaire completed on-site in 2022 to provide information on existing employees experiences of cycling to and from Culham Campus. This identified 94% of respondence would travel from homes within Oxfordshire, with 44.5% of the total from within OX14, the same postcode area as the Campus. There were 48% of respondents that currently do, or would, use the route between Culham Campus and Abingdon. Many respondents had concerns about existing cycle routes and suggested improvements included resurfacing and fixing pot holes, additional cycle lanes/off road cycle paths, and segregated cycle routes. There were also desires for more weather proof cycle storge, showers/changing facilities and cycle maintenance facilities on-site.

4.24 A cycle route over the Nuneham viaduct has been suggested by cyclist based on the Campus to reduce journey times from Abingdon. However discussions with Network Rail and GWR have confirmed this is not considered feasible, mainly due to safety concerns. A proposed new route over the Thames to Abingdon is contained within the Abingdon LCWIP (see following paragraphs) and this will serve a similar purpose. It will reduce the length of the route to/from Abingdon for both pedestrians and cyclists considerably, and provide a more attractive purpose built route.

4.25 Oxfordshire County Council are proposing significant improvements to pedestrian and cycle infrastructure locally though the Abingdon LCWIP (Local Cycling and Walking Infrastructure Plan). This includes a potential new river crossing to provide an additional link between Culham Campus and Abingdon. A Didoct LCWIP is also being prepared which has a wider remit extending towards Culham Campus. Other improvements are proposed by OCC as part of the HIF Infrastructure proposals and through S106 funding from UKAEA and other sources.

4.26 Key proposed new routes and improvements to existing cycle routes are:

- New cycle route with bridge over Thame Lane and the Thames, to the east of Abingdon (part of the Abingdon LCWIP)

- Link to Didcot, via a new river crossing, marked C on the HIF Infrastructure Alignment Overview plan in **Appendix E** (main works funded by HIF, with new ped/cycle facilities on south side of Abingdon Road, extending from opposite the Campus main entrance to the HIF infrastructure to be funded by the UKAEA via S106)
- Improvements on the route between Culham Campus and Clifton Hampden (and on to Berinsfield)

4.27 Funding is currently being sought for Phase 2 of the Science Vale Active Travel Network, when the Culham-Abingdon route will be considered in greater detail.

4.28 With the additional bridge on Thame Lane, more areas of Abingdon would be within 5km and places such as Kennington and parts of south Oxford would become within a 10km cycle journey, with further areas of south Oxford and Kingston Bagpuize and Southmoor becoming within a 15km cycle journey. With the addition of the HIF infrastructure the rest of Didcot and Harwell would be within an approximately 10km cycle journey. With the addition of the proposed improvements along the route to/from Clifton Hampden and Berinsfield, this route will become more attractive.

4.29 The improvements to cycle routes will also be beneficial to those walking to the Campus. However, the distances involved are generally more suitable for cycling than walking.

4.30 Postcode data was provided for existing employees at Culham Campus in 2021 to complete a simple review of the proportion of employees that currently live within 5km, 10km and 15km of the site, that would benefit from the proposed new cycle routes and improvements, and those that would become within each of those thresholds once the proposed new cycle routes are constructed. The figures suggest that the proposed new and improved cycle routes have the potential to encourage around an additional 8-10% of employees to consider commuting by cycle who may not have considered this before. The new and improved cycle routes would also reduce some journey times and improve the attractiveness of cycling as an option for commuting.

Bus Services:

4.31 A 400m walking distance to the nearest bus stop is recommended by the Institute of Highways and Transportation's Guidelines for Planning for Public Transport in Developments (IHT 1999). The nearest sets of bus stops to the site are situated on Abingdon Road, approximately 280m from the security gate to Culham Campus. The bus stops feature sheltered seating and tactile paving.

4.32 A dedicated bus service (route no. 45) was funded by Section 106 contributions from the OAS development at Culham Campus, and is operated by Thames Travel. There have been recent changes to the service, including the route being extended to the east and west. To the

east, the route now continues through Clifton Hampton, Burcot, Berinsfield and to southern areas of Oxford (Stanford-on-Thames, Littlemore and Cowley), and to the west the route now extends to Abingdon College.

4.33 The service operates Monday to Friday and originally just operated during peak commuter periods, but now operates hourly throughout the day, with increased frequency through the morning and evening peak hours for commuting.

4.34 Berinsfield has a population of approximately 3,000 people and has a major residential site allocation within the adopted Local Plan that would increase the size of the village by approximately 1,700 homes. The southern areas of Oxford (Littlemore, Iffley and Cowley) has a population of approximately 20,000 people and is also likely to expand due to the STRAT11 (3,000 new homes) and STRAT12 (1,800 new homes). Both locations are therefore likely to provide rapidly expanding population bases which Culham Campus will benefit from linking to.

4.35 The recently introduced Thames Travel 95 bus service travels between the Campus and Didcot, calling at Long Wittenham on route. This service provides 5 daily services in each direction, during peak commute times.

4.36 The areas of Didcot served by the new service have a population of approximately 15,000 people, which will expand further as the north eastern development scheme (2,030 new homes) is built out. This area of Didcot will therefore provide an expanding population base with direct connection to Culham Campus.

4.37 The UKAEA will continue to liaise with the public transport offices at OCC through the regular Transport Liaison Meetings and directly, to agree efficient use of S106 funding provided by UKAEA, including increased services and extended routes, and reviewing of bus timetable changes to tie in with employees leaving Culham Campus and for connections to other bus and train services.

4.38 The proposed Clifton Hampden bypass will include new bus stops with access directly to the Campus. There will also be a new bus stop provided outside the main entrance security gate, which will be used by the direct bus services to the site (e.g. the existing number 45 and 95 services above). The design of the new entrance area is being developed; however, the new bus stops are expected to be within 50m of the main entrance.

4.39 During recent discussions with OCC, it was indicated that further bus service routes are likely to be introduced in the area as development of the STRAT10i (1,700 new homes at Berinsfield) and STRAT7 (3,000 new homes at Chalgrove) allocations within the adopted SODC Local Plan come forward. The STRAT10 proposals are anticipated to deliver a new bus service between Berinsfield and Abingdon whilst it is proposed that the STRAT7 scheme will deliver a new bus service between Chalgrove and Didcot. Both of the proposed bus services would operate with a half-hourly

service frequency and call along the A415, outside of Culham Campus, at the bus-laybys proposed as part of the HIF funded bypass. The provision of these bus services would increase the attractiveness of public transport use by staff and visitors to Culham Campus.

Train Services:

4.40 Culham train station is a walking distance of approximately 850m from the Culham Campus security gate, and provides access to train services between Oxford and Didcot Parkway, with occasional services to Banbury and Reading.

4.41 The train journey between Oxford and Culham takes approximately 10 minutes, and between Didcot and Culham takes just 5-7 minutes. The services calling at Culham also call at stations at Appleford and Radley.

4.42 The main gate development proposals, alongside are configuration of the entrance to the Campus to tie in with the proposed HIF infrastructure, include improvements to the pedestrian and cycle route between the station and the Campus. The Framework Masterplan for Culham Campus also identifies future potential for a shorter and more attractive link to be provided.

4.43 The station, operated by Great Western Railway (GWR), has seating, sheltered waiting facilities, real time information displayed through the Web CIS (Customer Information System) on the platforms and information points. Cycles can be taken onto the trains subject to their Cycle Policy and there is usually space for two full size cycles per train.

4.44 The Oxfordshire Rail Corridor Study has proposed a number of schemes for Oxfordshire. As part of this Culham station has been identified for investment. It is anticipated that it will become a district centre with the development of the adjacent Culham Science Village. Plans of the proposals are starting to be worked on.

4.45 There is now an hourly service at Culham station and it is anticipated that this will increase to 4 trains or more per hour in time. The East-West rail extension from Milton Keynes beyond Oxford to Didcot will call at Culham and will facilitate these additional train services. The East-West rail extension is due to complete in 2026, but other opportunities for some increased services may exist prior to then through timetable adjustments.

Car:

4.46 Culham Campus has its own car share scheme (www.culhamcarshare.com) hosted by Mobilityways Ltd and is available free of cost to all members of staff based at Culham Campus. The website generally promotes car sharing and matches up potential opportunities to share car journeys to and from Culham Campus.

4.47 Some EV charging facilities have been provided on site, and EV charging facilities will be included within new car parks provided on campus.

4.48 Existing car parking spaces on campus are generally well used, but not quite back to pre-Covid levels. There is some re-purposing of existing spaces to off-set new provision associated with some of the current development proposals, (which is in line with the Framework Masterplan for Culham Campus and OCC's Local Transport and Connectivity Plan).

4.49 The 'out of town' location of Culham means that the majority of journeys to work by Culham employees are in the opposite direction to the main commuter traffic flows (except those who come through Abingdon-on-Thames, and are with the main flow for some of the way).

4.50 The core working hours of occupiers at the site straddle the normal concentration of commuter patterns, with many forms of flexible working in operation helping to reduce peak demand on the highway network.

5.0 Targets

5.1 The Oxfordshire Local Transport and Connectivity Plan (LTCP) aims to replace or remove 1 in every 4 car trips in Oxfordshire by 2030, and then a further 1 in 3 by 2040. Applying this to the proportion of car drivers recorded travelling to and from Culham Campus in 2019 provides the following proportions.

Table 5.1: Applying LTCP Targets

Mode	2019 Survey	2030	2040
Car Drivers	71.2%	53.4%	35.6%

5.2 The Framework Masterplan for Culham Campus includes a long term aspiration to increase walking as a mode of travel to 5%, cycling to 15%, bus to 25% and train to 20%, by 2050. This would bring car use down to just 35%; around half of the current proportion. There are also short and medium term targets to work towards this.

5.3 The aspirations of the Framework Masterplan for Culham Campus broadly tie in with the Oxfordshire LTCP targets for car trips in the county, with 60% car drivers by 2025, and less than 50% by 2035 and around 35% by 2050. Therefore the aspirational proportions for all modes from the Framework Masterplan for Culham Campus have been used to form the proposed Culham Campus Travel Plan targets.

5.4 The SMART (Specific, Measurable, Achievable, Realistic, and Timebound) targets for the Culham Campus Travel Plan are set out below.

5.5 The Culham Campus Travel Plan targets are to reduce the proportion of car drivers travelling to and from Culham Campus, and increase the proportions of other modes to the percentages set out in **Table 5.2** below, by the date stated. The key target is to reduce the number of car drivers, and therefore there is some flexibility in the proportions of more sustainable modes.

Table 5.2: Culham Campus Travel Plan Targets

Mode	2019 Survey Results	Short Term 2025	Medium Term 2035	Long Term 2050
Pedestrian	10.4%	12.5%	2.5%	5%
Train			15%	20%
Cycle	7.8%	9%	12.5%	15%
Motorbike	1.5%	1.5%	1.5%	1.5%
Bus	1.2%	7.5%	15%-20%	25%
Car Drivers	71.2%	58.5%	35%-50%	25%-45%
Car Share	7.8%	10%		

5.7 Future monitoring should establish the proportion of pedestrian and train users separately, via interviews during the multi-modal movement counts

and/or via staff travel questionnaires. It would also be useful to start to record levels of electric vehicle use, as although there is no proposed target at this time, there could be in the future.

5.8 Significant increases in train use for travel to and from Culham Campus is reliant on improvements to rail services that are not under the control of the UKAEA. Any delays to the proposed improvements could therefore limit the achievable increases in the use of that mode of transport. Therefore, this in particular should be considered as the Travel Plan is monitored and reviewed, and targets should be adjusted as appropriate to ensure they remain achievable and realistic, as part of being SMART targets.

5.9 Bus service improvements will be provided with S106 funding from the UKAEA associated with the recently approved and future planning applications at Culham Campus, which should assist in increasing frequency and attractiveness of services over time, however, this is also commercially led. The timing and details of the S106 funding being used is determined by OCC, and discretion, although is discussed at Transport Liaison meetings with all parties, to seek to maximise .

5.10 Other local infrastructure improvements associated with the HIF scheme including the Clifton Hampden by-pass, which include improved pedestrian and cycle infrastructure, and also active trave improvements associated with the Abingdon LCWIP, Didoct LCWIP, and Science Vale Active Travel Network Phase 2, will also unlock the potential to achieve the Travel Plan targets for increases in pedestrian and cycle trips. There is also S106 funding from the UKAEA towards localised off-site pedestrian and cycle improvements, but the delivery of these works will be determined by OCC.

5.11 Irrespective of the above constraints, there are numerous measures within the UKAEAs control that are proposed to achieve modal shift at Culham Campus. These are summarised in the following section.

6.0 Measures

6.1 This section sets out ongoing and proposed Travel Plan measures to be implemented by UKAEA. They include a combination of 'hard measures' to provide high quality infrastructure for sustainable modes of travel and 'soft measures' to raise awareness of and promote these facilities and travel modes.

6.2 A log of key Travel Plan achievements and milestones to date is provided in **Appendix F**.

6.3 The Action Plan in **Appendix G** sets out the ongoing and proposed tasks, which objective/target they are associated with, timescales for completion, who is responsible and how success will be measured.

General Travel Plan Information and Promotion

6.4 Continue to promote the Culham Campus Travel Plan to all employees and visitors.

6.5 For all on-site developments - prepare and implement Travel Plans for new buildings as part of seeking to achieve BREEAM excellent accreditation.

6.6 Continue to provide up to date sustainable travel information on the Culham Campus website (culham.org.uk) with links to public transport timetables, cycle routes, and other information.

6.7 Continue to display up to date sustainable transport information in communal areas.

6.8 Continue to issue site notices and newsletters to share travel and transport information.

6.9 Provide display screens in communal area with live public transport information.

Reducing the Need to Travel

6.10 Continue to provide a range of on-site amenities and services to reduce the need to travel during the working day. The following amenities are available:

- Staff Restaurant/DeliBar
- Coffee Shop
- Two Site Shops
- Children's Day Nursery
- Conference Centre
- Lecture Theatre
- Sports Facilities
- Sports & Social Club
- Bike Workshop
- Publications, printing and reprographic services

6.11 Continue to provide and encourage opportunities for flexible working hours and home/remote working where practical and efficient, to help reduce peak hour demands on the local highway network.

6.12 Continue to encourage the use of virtual meetings and conference calls where appropriate.

6.13 Continue to encourage the use of car sharing and shared taxis for work related journeys offsite.

Active Travel (Walking and Cycling)

6.14 Continue to provide and maintain covered cycle storage facilities, with new buildings to have BREEAM compliant cycle storage and cycle facilities (showers, changing facilities, lockers, etc.)

6.15 Continue to support the CulBUG (Culham Bicycle User Group) which provides information for cyclists and a forum to raise issues facing cyclists on site and in the local area, and encourage their proactive involvement in relevant Travel Plan actions, investigations and monitoring.

6.16 Continue to provide repair stations and with liaison with CulBUG monitor need for any additional maintenance facilities.

6.17 Continue to provide Dr Bike sessions.

6.18 Continue to promote the Government's Cycle to Work scheme for UKAEA employees, and to Culham Campus tenants, for financial assistance for the purchase of bicycles, e-bikes and other cycling equipment.

6.19 Continue to hold the annual Cycle to Work day, with incentives such as a free breakfast.

6.20 Continue to liaise with SODC and OCC regarding local pedestrian and cycle improvement opportunities.

6.21 Provide S106 contributions towards off-site pedestrians and cycle improvements where appropriate. Recent S106 contributions have been agreed for the following infrastructure schemes to promote active travel, in the local area, including for journeys to and from Culham Campus:

- within the existing public highway, improve the existing footway on the south side of the A415 to a shared footway/cycleway facility with verge / landscaped (buffer) area, from the Culham Campus site entrance towards the train station (approximately 900m).
- enhance the existing Tollgate / Abingdon Road signalised junction by providing an integral pedestrian and cycling crossing facility.

6.22 Continue to maintain and enhance pedestrian and cycle routes on site, including recreational routes and crossing facilities, though the UKAEA Planned Maintenance Programme.

6.23 Provide improvements to pedestrian and cycle routes and facilities on site in line with the Culham Campus Masterplan.

Bus & Rail

6.24 Provide S106 contributions towards public transport improvements where appropriate.

6.25 Provide high quality bus stops, as part of the reconfiguration of Culham Campus main entrance, linked to HIF infrastructure scheme.

6.26 Provide improved pedestrian and cycle routes to/from Culham train station within UKAEA land ownership, as part of the reconfiguration of Culham Campus main entrance, linked to HIF infrastructure scheme.

6.27 Facilitate a potential new pedestrian and cycle route to/from Culham train station within UKAEA land ownership, as part of the Culham Campus Masterplan, linked to the development of Culham Science Village.

6.28 Continue to liaise with bus operators and the public transport team at OCC, regarding improvements to bus and rail services, and Culham train station.

Car

6.29 Provide car parking hubs close to the Culham Campus main entrance(s), with a view to repurpose existing on-site car parking, and unlock potential for active travel on campus.

6.30 Continue to provide and promote the site specific Culham Car Share scheme.

6.31 Provide EV charging facilities within new car parks.

7.0 Management

7.1 The UKAEA have been committed to implementing a site-wide Travel Plan for Culham Campus since 2016, and have renewed that commitment as part of their Framework Masterplan for the Campus.

7.2 The UKAEA has a nominated Travel Plan Co-ordinator for Culham Campus:

Culham Campus TPC: Sarah Lewis

E-mail: sarah.lewis@ukaea.uk

7.3 Key responsibilities of the Travel Plan Co-ordinator are:

- "Ownership" and management of the Travel Plan
- Implementing the Travel Plan measures
- Logging key achievements (see **Appendix F**)
- Raising Travel Plan related points at management level meetings
- Organising multi-model movement counts and travel surveys
- Reviewing progress towards targets
- Reviewing the Travel Plan measures and action plan
- Organising Travel Plan update reports
- Liaison with organisations providing transport provision and infrastructure Public Transport Operators and OCC

8.0 Monitoring and Review

8.1 The Action Plan in **Appendix G** includes actions associated with the monitoring and review of the Travel Plan.

8.2 There is a commitment to complete new travel surveys and review the site-wide Travel Plan at least every two years, but ideally annually.

8.3 Multi-modal movement counts and travel survey questionnaires are proposed to be undertaken in 2023, in order to help quantify walking and rail use, levels of awareness of the Travel Plan, car share scheme, CulBUG, and gather feedback from site users on further potential opportunities to help facilitate modal shift for them.

8.4 It would also be useful to start to record levels of electric vehicle use, as although there is no proposed target at this time, there could be in the future.

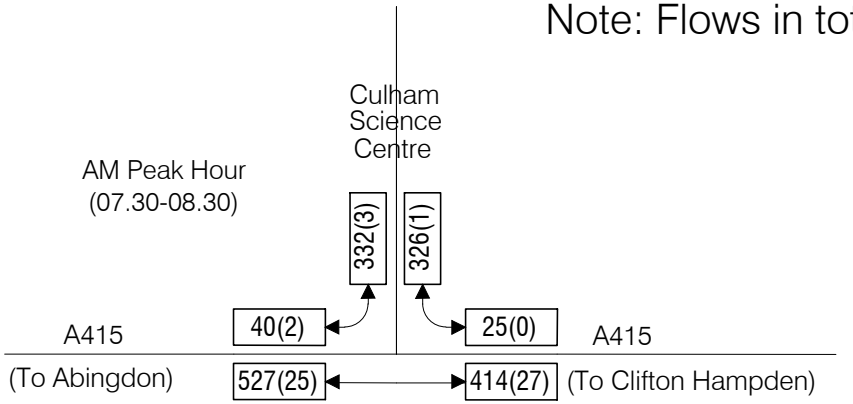
8.5 Monitoring of travel patterns is to be ongoing, at least in line with the timeframe of these Travel Plan targets which currently extend to 2050.

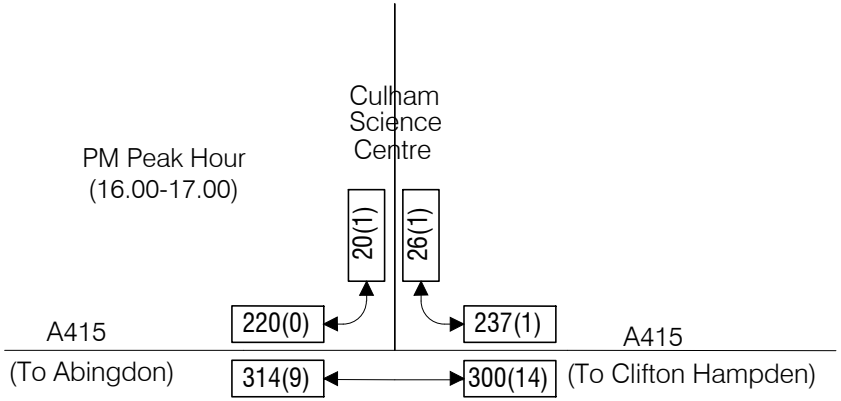
8.6 Targets, measures and actions will also be reviewed and amended, as part of the Travel Plan update reports.

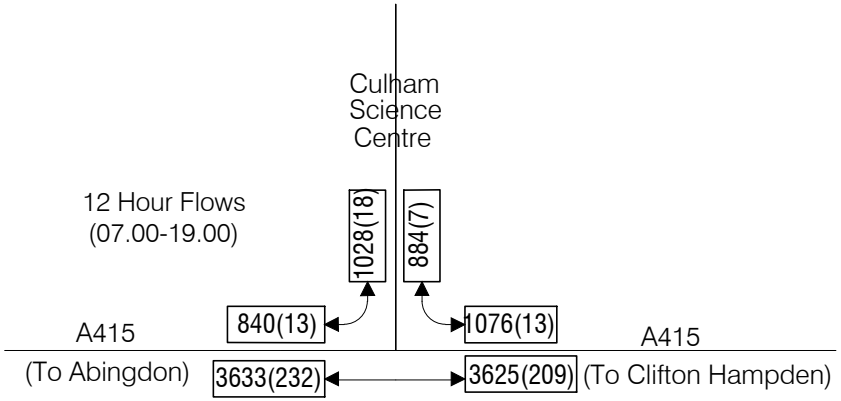
Appendix A

Traffic Flow Diagrams

Note: Flows in total vehicles (HGV's)







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A4

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Millimetres At Original Drawing Size

Rev.	Description	Date.	Drawn	Appr

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Drawing Status

FOR INFORMATION

Client

U.K. Atomic Energy Authority

Project Title

CULHAM SCIENCE CENTRE

Drawing Title

TRAFFIC FLOW DIAGRAMS 19.09.19

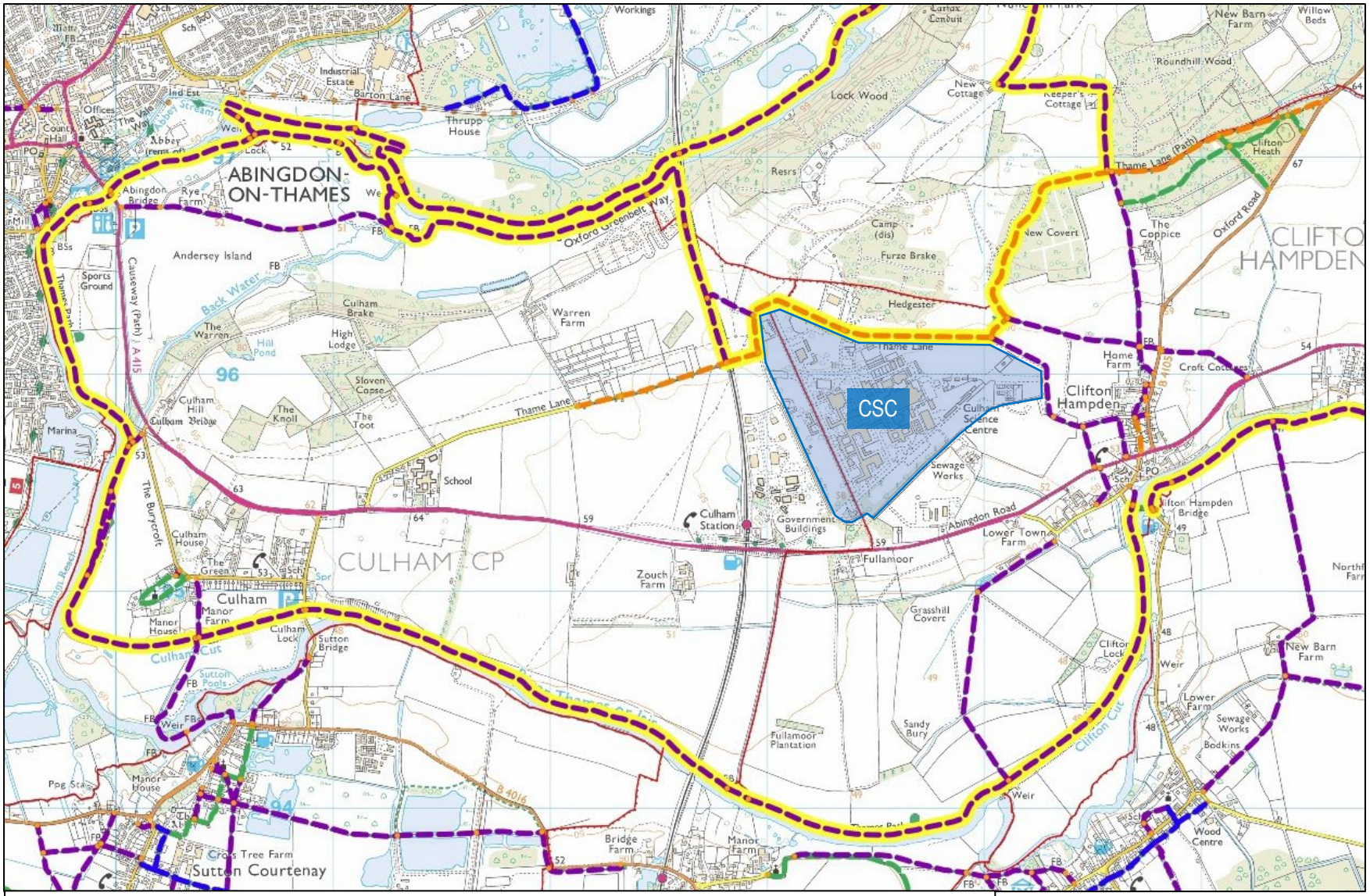
Drawn By:	MAM	Checked By:	MWR	Scale:	NTS
Project Engineer:	MWR	Approved By:	MWR	Date:	05.11.2018

Drawing Number: 03081-C11

Revision: -

Appendix B

Existing Public Rights of Way in the Vicinity of Culham Campus



Footpath

Bridleway

Restricted Byway

Byway

Promoted Path

Appendix C

Map showing cycle parking, showers and bus shelters

DRG. No. ERO-UKAEA-00-XX-DR-Z-5287

SHEET No. 01 OF 01

- DO NOT SCALE - IF IN DOUBT ASK -

- Entrance
- Bus Shelter
- Cycle Shelter/Rack
- Smoking Shelters
- Showers
- Bus Stop Drop off am
- Bus Stop Collection

BUILDING No.	SITE	SITE	CULHAM
DRAWN	IW	APPROVED	RS
CHECKED	AS		

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ISSUE P01: RE-DRAWN FROM DWG NUMBER 30864_1 AND BIKE SHELTERS UPDATED - MARCH 2022

USED ON/REF DRAWINGS

TITLE

SITE FEATURES ENTRANCES, SHELTERS AND SHOWERS

UK Atomic Energy Authority

CURRENT ISSUE P01 03/22

ORIGINAL SCALE 1:2000

FIRST ISSUE DATE 14/03/2022

DRG. No. ERO-UKAEA-00-XX-DR-Z-5287

SHEET No. 01 OF 01

A0 SIZE

CAD PRODUCED DRAWING - DO NOT MODIFY BY HAND

Appendix D

Science Vale Cycle Network Strategic Route Map

Science Vale Cycle Network (SVCN)
Strategic Route Map - Oct 2021

Proposed SVCN Strategic Routes

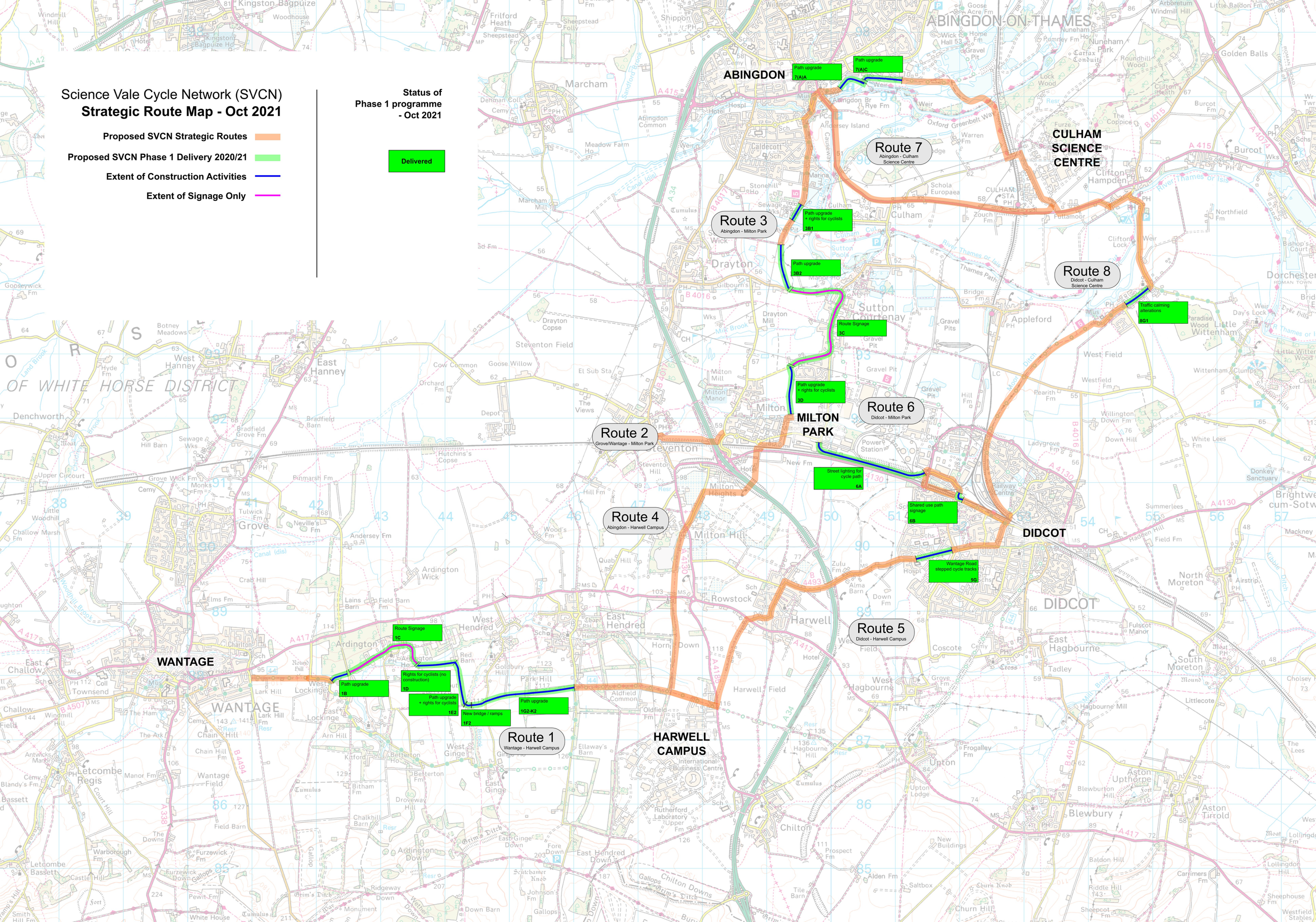
Proposed SVCN Phase 1 Delivery 2020/21

Extent of Construction Activities

Extent of Signage Only

Status of Phase 1 programme - Oct 2021

Delivered



Appendix E

HIF Infrastructure Alignment Overview

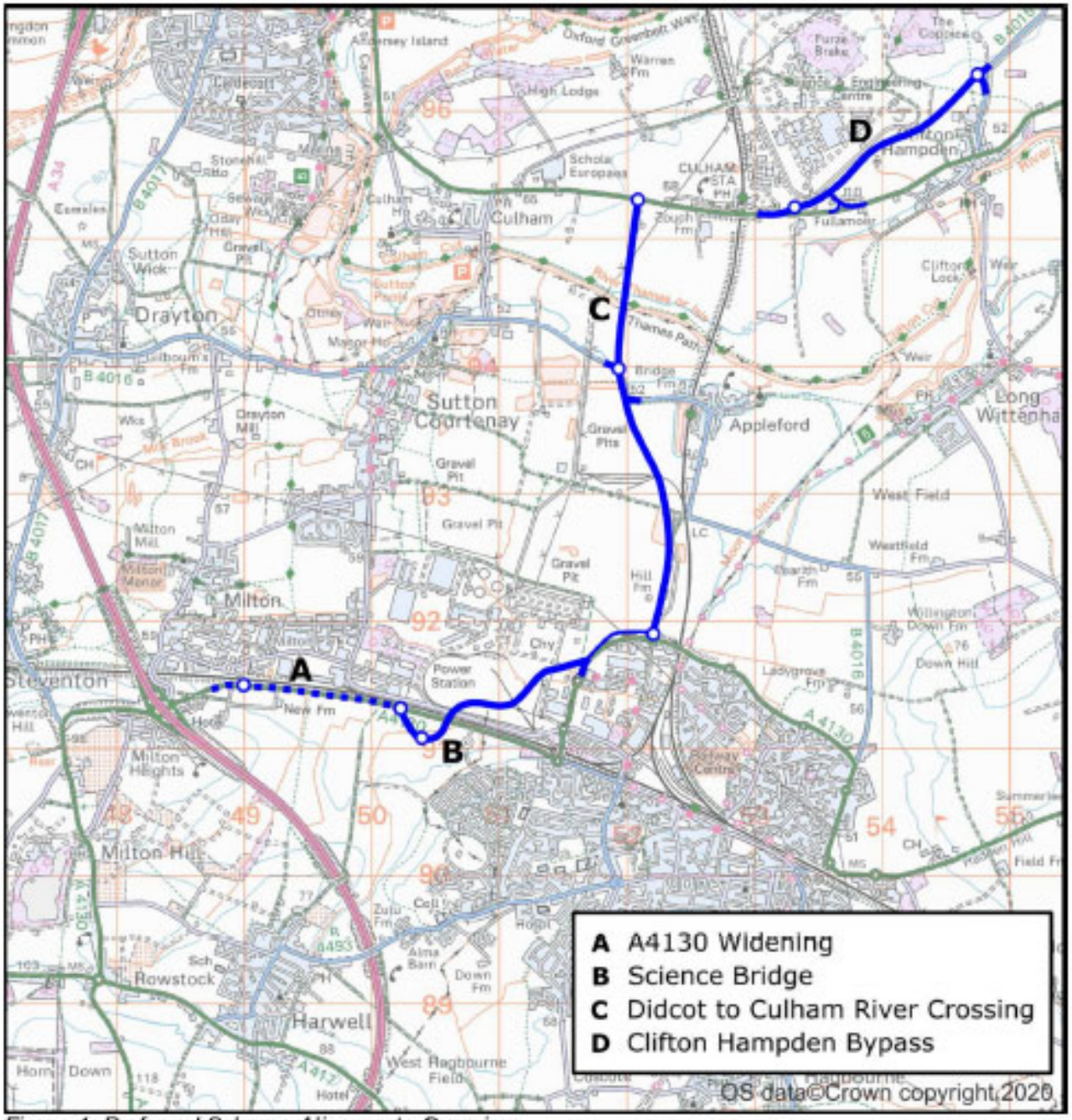


Figure 1: Preferred Scheme Alignments Overview

Appendix F

Log of Achievements and Milestones

WHEN	CATEGORY	DESCRIPTION	ADDITIONAL COMMENTS
2009	Improvement	UKAEA funded improvements to Culham Rail Station and footpath to CSC including installation of street lights	
	Improvement	Bus stops and shelters part funded by UKAEA installed at entrance on A415 including section of footpath linking bus stops to CSC	
	Survey	Annual Traffic Count	
2010	Survey	Annual Traffic Count	
2011	Improvement	Re-surfaced footpaths and carparks and renewed bay markings for cars, with dedicated motorcycle and disabled bays	Site-wide
	Event	Annual Bike to Work Event	55 cyclists in the first year
	Survey	Annual Traffic Count	
	Improvement	Additional Cycle Racks	
2012	Safety	Electronic Information Board at Main Gate	Digital temperature sign to warn of freezing conditions
	Event	Annual Bike to Work Event	
	Survey	Annual Traffic Count	
2013	Improvement/ Safety	Improved combined footpath/cycleway incl. modification of speed humps to provide gaps for cyclists riding through	On southern edge of A415 to CSC entrance
	Event	Annual Bike to Work Event	
	Survey	Annual Traffic Count	
	Improvement	Upgraded Street Lighting to LED	
2014	Observation	Bicycle trips increased by 2.5%	Since 2009
	Event	Annual Bike to Work Event	
	Improvement	Additional Bike Sheds, concrete plinth and Sheffield stands installed	
	Observation	Increase in rail users by 3%	Compared to 2009
	Observation	Reduction in car drivers by 6%	Compared to 2009
	Survey	Annual Traffic Count	
	Improvement	Additional/Refurbish showers	Building D3 Showers refurbished
2015	Improvement	Additional/Refurbish showers	Buildings E1 & F7 Refurbished
	Facility	Bicycle Workshop launched	CPG made building available non-gratis for use by staff and workshop
	Event	Annual Bike to Work Event	148 cyclists attend the event
	Event	OCC Cycle maps/freebies	Handed out at OCC/CSC Travel Choices event
	Facility	Dr Bike Services negotiated	Monthly since
	Improvement	Additional Cycle Shelters installed	Buildings K1 & J20
	Improvement	Modifications to showers and additional gents shower installed in E2	Buildings K1 & E2
	Event	Car Share Promotion	As part of National Liftshare Week
n/a	Provision	Cyclists Site Pass Arm Bands	Provided free

2016	Provision	Cycle Proficiency Classes	Offered via local bike retailer
	Event	Carshare Event	Febr7% increase in members
	Tools	OCC Journey Planner App	made available via Culham.org.uk
	Facility	Provision of Public Bike Repair Stations x 2 funded by OCC	On order
2016	Facility	Clothes drying rooms installed	One in new building B1 and 'K' block
	Event	Annual Bike to Work Event	Planned for June 2016
	Event	Car Share Promotion	Took place 27 April
CSC TRAVEL PLAN MAY 2016 ONWARDS			
2016	Event	Annual Bike to Work Event	June - 71 cyclists took part
	Setback	Withdrawal of both Bus Service T2 and 114 leaving CSC with no bus service at all	July - Not conducive to encouraging use of public transport or support growth in the area
	Improvement	Re-surfacing of section of Farm Road and front of F4/Middle Way	
	Provision		
	Building Relationships	Invited local stakeholders affected by bus cuts to meet with bus operators to look for an alternative/way forward	1st meeting held 1 Aug. Follow up meeting - 20 Sept
	Event	Annual Traffic Count	20 September
	Provision	Br Bike workshops	Monthly
	Building Relationships	Agreed to meet with Zipabout, to discuss bespoke app to identify congestion and suggest alternative routes	19 September
2017	Health & Welfare	Outdoor Gym purchased and installed	April 2017
	Health & Welfare	Tennis courts re-marked	April 2017
	Improvement	Bike Repair Station installed	May 2017
	Event	Outdoor Gym Launch	May 2017
	Event	Bike to Work Breakfast	June 2017 94 cyclists took part
	Provision	Dr Bike workshops	Monthly March - October
	Event	Annual Traffic Survey	September 2017
2018	Provision	Br Bike Workshops	February to September
	Event	Annual Bike to Work	June – 112 cyclists took part
	Health & Welfare	Softball pitches re-marked	June
	Facility	New sports facility planning permission granted	July
	Event	Car Share Promotion	October
	Event	Travel Survey to all CSC staff	November
	Event	Annual Travel Survey	September
	Provision	Mobile Catering service (4 stops, twice daily)	November
2019	Provision	Br Bike Workshops	February to September
	Event	Annual Bike to Work	June
	Provision	Abingdon to CSC 45 bus service	August
	Event	Annual Travel Survey	September

	Event	Thames Travel Bus Service Promotion	September
	Event	Liftshare promotion	October
2020	Facility	Indoor gym opened	March
	Provision	Didcot to CSC 95/95B bus service	January
	Improvement	Increase in the number of buses on the 45 bus service	January
2021	Provision	EV charging points	June
	Improvement	New Barista Costa Coffee bar	July
	Improvement	Veranda to extend restaurant area	August
2022	Improvement	Restaurant Quad re-landscaped	June
	Provision	Dr Bike Workshop	March to October
	Provision	MUGA opened	May
	Event	Bike to Work	June
	Improvement	Replacement of the older bike sheds	Summer
	Provision	45 and 95/95B bus services return to pre-pandemic levels	August
2023	Provision	CulBUG forum re-instated and promoted to all on site	January
	Provision	Dr Bike Workshop	March to October

Appendix G

Action Plan

Action	Related Target/Objective	Timescale for completion	Responsibility	Successfully completed?
Continue to promote the Culham Campus Travel Plan to all employees and visitors	All	Long Term	Travel Plan Co-ordinator	High levels of Travel Plan awareness
Prepare and implement Travel Plans for new buildings as part of seeking to achieve BREEAM excellent accreditation		Long Term – information provided to building users from occupation onwards	Project Managers and Travel Plan Co-ordinator	Building specific Travel Plans produced, approved and implemented
Continue to provide up to date sustainable travel information on the Culham Campus website (culham.org.uk) with links to public transport timetables, cycle routes, and other information	Increase proportion of pedestrian, cycle and public transport journeys to and from the site	Long Term	Travel Plan Co-ordinator	Information available to staff and visitors via website
Continue to display up to date sustainable transport information in communal areas.		Long Term	Project Managers and Travel Plan Co-ordinator	Information available to staff and visitors
Continue to issue site notices and newsletters to share travel and transport information.		Long Term	Travel Plan Co-ordinator	Information provided to staff

Action	Related Target/Objective	Timescale for completion	Responsibility	Successfully completed?
Provide display screens in communal area with live public transport information	Increase proportion of journeys to and from the site by bus	Short Term – installation Long Term – maintained	Project Managers and Travel Plan Co-ordinator	Screens provided and information available to staff and visitors
Continue to provide a range of on-site amenities and services	Reduce the need to travel	Long Term	UKAEA	Facilities provided
Continue to provide and encourage opportunities for flexible working hours and home/remote working	Reduce the need to travel	Long Term	The UKAEA	Flexible working policies in place
Continue to encourage the use of virtual meetings/conference calls where appropriate		Long Term	The UKAEA	Technology widely used
Continue to encourage the use of car sharing and shared taxis for work related journeys offsite		Long Term	The UKAEA	Shared journeys encouraged and increasing
Continue to provide and maintain covered cycle storage cycle facilties	Increase proportion of cycle journeys to and from the site	Long Term	The UKAEA and Travel Plan Co-ordinator	Information available to staff and visitors via website / newsletters / leaflets / notices
Install cycle parking facilities to BREEAM standards alongside new buildings		Short Term – prior to building occupation Long Term – to continue to apply to new buildings	Project Managers and Travel Plan Co-ordinator	Facilities provided

Action	Related Target/Objective	Timescale for completion	Responsibility	Successfully completed?
Continue to support the CulBUG, encourage involvement in Travel Plan	Increase proportion of cycle journeys to and from the site	Long Term	Travel Plan Co-ordinator	CulBUG active with good level of membership
Continue to provide repair stations and monitor need for additional maintenance facilities		Long Term	The UKAEA and Travel Plan Co-ordinator	Facilities provided
Continue to provide Dr Bike sessions	Increase proportion of cycle journeys to and from the site	Short, Medium and Long Term	Travel Plan Co-ordinator	Regular sessions provided
Continue to promote the Cycle to Work scheme		Long Term	The UKAEA and Travel Plan Co-ordinator	Facilities provided
Continue to hold the annual Cycle to Work day		Short, Medium and Long Term	Travel Plan Co-ordinator	Annual event held
Continue to liaise with SODC and OCC regarding local pedestrian and cycle improvement opportunities	Increase proportion of pedestrian movements to and from the site, and on campus and	Long Term	The UKAEA and Travel Plan Co-ordinator	Facilities provided
Provide S106 contributions towards off-site pedestrians and cycle improvements where appropriate	Increase proportion of cycle journeys to and from the site	Medium Term – in line with S106 agreements for specific planning permissions	The UKAEA	S106 contribution made and highway works completed

Action	Related Target/Objective	Timescale for completion	Responsibility	Successfully completed?
Install showers/lockers/drying/ changing facilities to BREEAM standards within new buildings	Increase proportion of pedestrian movements to and from the site, and on campus and Increase proportion of cycle journeys to and from the site	Short Term – prior to building occupation Long Term – to continue to apply to new buildings	Project managers and Travel Plan Co-ordinator	Facilities provided
Complete land transfer to facilitate the OCC HIF infrastructure scheme, which includes improved pedestrian and cycle facilities		Medium Term – in line with HIF infrastructure scheme schedule	The UKAEA	Land transfer completed and highway works completed
Continue to maintain and enhance pedestrian and cycle routes on site, including recreational routes and crossing facilities, though the UKAEA Planned Maintenance Programme		Short, Medium and Long Term	The UKAEA	Facilities provided and maintained
Provide improvements to pedestrian and cycle routes and facilties on site in line with the Culham Campus Masterplan		Medium and Long Term – in line with Culham Campus Masterplan	The UKAEA	Improved facilities provided

Action	Related Target/Objective	Timescale for completion	Responsibility	Successfully completed?
S106 contributions for improvements to local bus services where appropriate	Increase proportion of journeys to and from the site by bus	Medium Term – in line with S106 agreements for specific planning permissions	The UKAEA	S106 contribution made and improved bus services operational
Provide high quality bus stops, as part of the reconfiguration of Culham Campus main entrance, linked to HIF infrastructure scheme		Medium Term – in line with HIF Infrastructure scheme schedule	The UKAEA	Facilities provided
Provide improved pedestrian and cycle route to/from Culham train station within UKAEA land ownership, as part of the reconfiguration of Culham Campus main entrance, linked to HIF infrastructure scheme	Increase proportion of journeys to and from the site by rail	Medium Term – in line with HIF Infrastructure scheme schedule	The UKAEA	Facilities provided
Facilitate a potential new pedestrian and cycle route to/from Culham train station within UKAEA land ownership, as part of the Culham Campus Masterplan, linked to the development of Culham Science Village		Medium and Long Term – in line with Culham Campus Masterplan	The UKAEA	Route provided

Action	Related Target/Objective	Timescale for completion	Responsibility	Successfully completed?
Continue to liaise with bus operators and the public transport team at OCC, regarding improvements to bus and rail services, and Culham train station	Increase proportion of journeys to and from the site by public transport	Long Term – regular Transport Liaison meetings (approximately quarterly) and in line with planning applications	Travel Plan Co-ordinator	Facilities provided
Provide car parking hubs close to the Culham Campus main entrance(s), with a view to repurpose existing on-site car parking, and unlock potential for active travel on campus	All	Short, Medium and Long Term – in line with Culham Campus Masterplan	The UKAEA	Parking hubs provided and on-site parking repurposed
Continue to provide and promote the Culham Car Share scheme	Increase the proportion of journeys to and from the site by car sharing	Long Term	The UKAEA and Travel Plan Co-ordinator	Scheme available and promotion to staff
Provide electric vehicle charging facilities within new car parks	Promote use of electric vehicles	Short, Medium and Long Term – prior to opening of car park	Project managers and Travel Plan Co-ordinator	Facilities provided
Organise Travel Surveys in line with the monitoring schedule	All	Short Medium and Long Term – at least every 2 years, ideally annually	Travel Plan Co-ordinator	Surveys completed
Review progress, targets and the proposed measures and actions	All	Short Medium and Long Term – at least every 2 years, ideally annually	Travel Plan Co-ordinator	Travel Plan report updated

Culham Campus

Travel Plan

Produced by:

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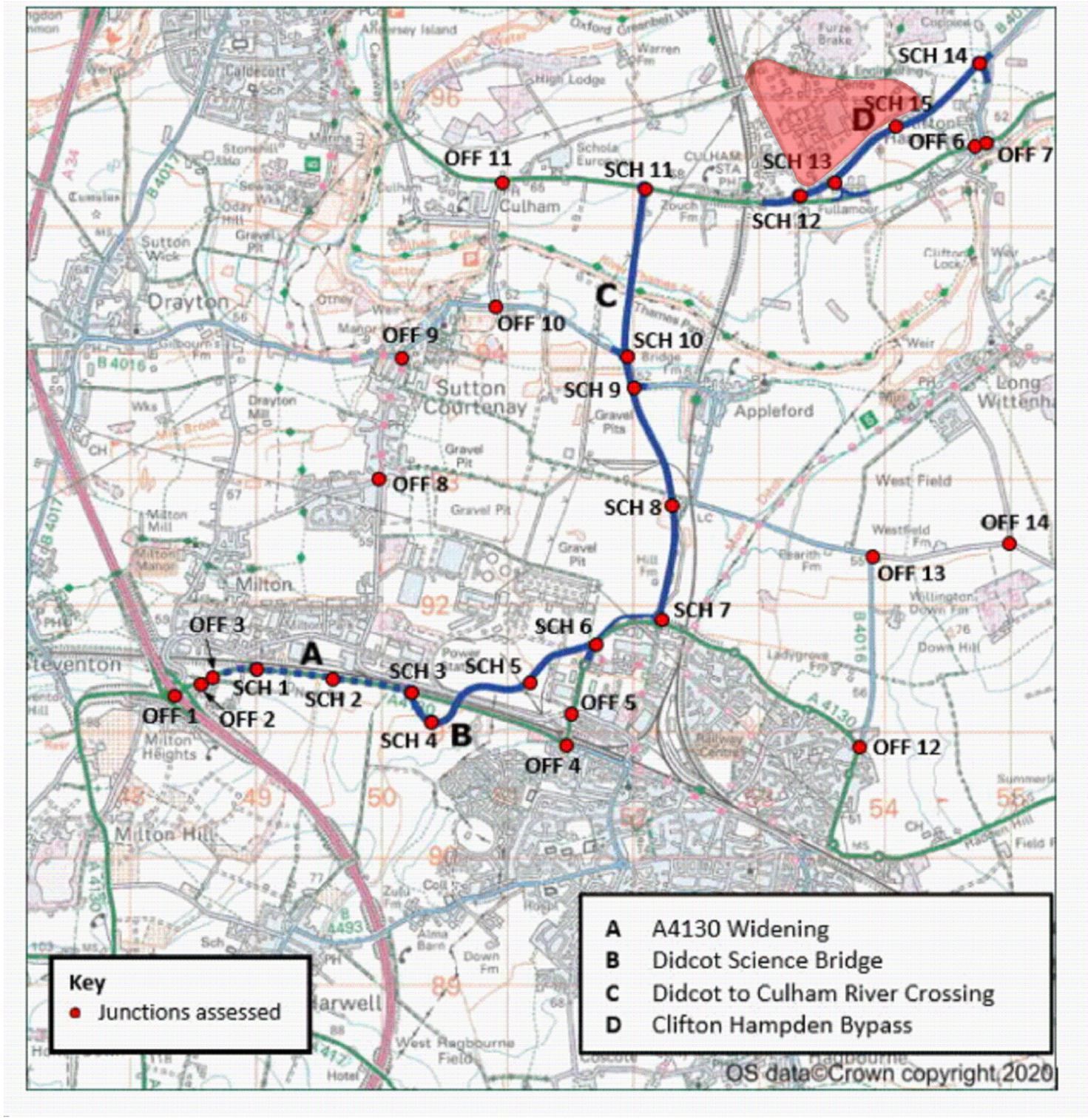
UK Atomic Energy Authority

Appendix C

Transport Assessment Study Area and Culham Campus Context



NOTES

1. This drawing is to be read in conjunction with all relevant documents and specifications.
2. Dimensions are not to be scaled.

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KEY

Culham Campus

N

Rev.	Description	Date	By	Chkd

Glanville
Survey > Plan > Engineer

Civil Engineering
Structural Engineering
Transport Planning
Highways Engineering
Building Surveying
Geomatics

Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client : UK Atomic Energy Authority

Project : HIF1 Planning Inquiry

Title : Culham Campus In Context of HIF Scheme

Engineer : T. Hart
Date : January 2024
Director : T. Foxall
Scale : NTS
Status : INFORMATION

Drawing No. 8240105/6001
Rev

Appendix D

Photographs of Junctions 'OFF 6', 'OFF 7', 'OFF10' and 'OFF11'

'OFF6' - A415 Signalised Junction with High Street

High Street northbound

Abingdon Road A415 eastbound

Watery Lane southbound

Abingdon Road A415 westbound

'OFF7' - A415 Signalised Junction with B4015 Oxford Road

Abingdon Road A415 eastbound

B4015 southbound

Abingdon Road A415 westbound

'OFF10' - Abingdon Road Junction with B4016 Appleford Road

Abingdon Road southbound

Appleford Road B4016 eastbound

Appleford Road B4016 westbound

'OFF 11' - A415 Signalised Junction with Tollgate Road

Tollgate Road northbound

Abingdon Road A415 eastbound, image 1

Abingdon Road A415 westbound

Abingdon Road A415 eastbound, image 2

Appendix E

Culham Campus Section 106 Contribution Summary

Recent Section 106 Contributions Secured from Development at Culham Campus

Application Ref. No.	Contribution	Towards	Paid
P19/S0355/FUL	£50,000 (Bus Service Improvement – 1st Instalment – prior to the implementation of development)	Improvement of bus services between Culham Science Centre and Abingdon	Yes
	£2,040	Travel Plan Monitoring	Yes
	£50,000 (Bus Service Improvement – 2nd Instalment – 12 months post occupation of the site)	Improvement of bus services between Culham Science Centre and Abingdon	Yes
P19/S2198/FUL	£125,000 (Bus Service Improvement – 1st Instalment – prior to the implementation of development)	Improvement of bus services between Culham Science Centre and Abingdon	Yes
	£2,040	Travel Plan Monitoring	Yes
	£125,000 (Bus Service Improvement – 2nd Instalment – 12 months post occupation of the site)	Improvement of bus services between Culham Science Centre and Abingdon	Yes
P21/S1384/FUL	£123,379.33	Improvement of local bus services to Culham Science Centre, including but not limited to improved services to Cowley, Berinsfield, Abingdon and Didcot	No
	£1,446	Travel Plan Monitoring	No
P21/S1257/FUL	£100,000 (First Strategic Highway Contribution prior to implementation of the development)	Enhancing the Tollgate / Abingdon Road signal junction by providing a pedestrian and cycling crossing facility and associated works	Yes
	£325,000 (Second Strategic Highway Contribution prior to occupation of the development)	Local pedestrian and cycle improvements	No
	£151,525.44 (50% of the Public Transport Contribution) and £2,379 (100% of the Travel Plan Monitoring Fee) prior to occupation of the development	Improvement of local bus services to Culham Science Centre, including but not limited to improved services to Cowley, Berinsfield, Abingdon and Didcot and Travel Plan Monitoring	No

Application Ref. No.	Contribution	Towards	Paid
	£151,525.44 (Remaining 50% of the Public Transport Contribution within 12-month of occupation of the development)	Improvement of local bus services to Culham Science Centre, including but not limited to improved services to Cowley, Berinsfield, Abingdon and Didcot	No
P17/S4193/FUL	£125,000 (Bus Service Improvement – 1st Instalment – 3 months following implementation of development)	Improvement of bus services between Culham Science Centre and Abingdon	Yes
	£2,040	Travel Plan Monitoring	Yes
	£125,000 (Bus Service Improvement – 2nd Instalment – 12 months post occupation of the site)	Improvement of bus services between Culham Science Centre and Abingdon	Yes

Appendix F

Local Transport and Connectivity Plan Extract (Appendix 1)

BAN4	Seek funding from new development sites to ensure they are served by high quality walking and cycling routes to off-site amenities.	A number of s278 schemes delivered.
	Conduct walking and cycling network assessment studies and prioritise improvements to deficiencies in the networks.	Town centre walking audit completed 2018; LCWIP being carried out at the moment.
	As identified in the Cherwell Local Plan 2011-2031 (part one) seek new pedestrian and cycle bridges, as part of the Canalside development, crossing the Oxford Canal and River Cherwell which will connect the rail station to the town centre.	One delivered by Longford Park; another secured through development on Canalside; on-going work to deliver the rest.
BAN5	This policy supports delivery of the Sustainable Transport Strategy.	N/A.
	We will seek mitigation from the impact of High Speed 2 (HS2) construction traffic across North Cherwell and Banbury.	Mitigation delivered at Wardington and Junction 11
BAN6	Oxfordshire County Council is working towards establishing a strategic Transport Contribution rate for developer funding, which will be adopted in a future update of this strategy.	No change.

Science Vale Area Strategy

Policy	Published Text	2022 Update / Context / Situation
SV 1.1	Delivering access and journey reliability improvements at Milton Interchange. To improve capacity, relieve congestion and accommodate additional traffic from planned development.	A 'hamburger' link was delivered under the A34, with widening across the roundabout, which opened in May 2015. The updated area strategy will consider further improvements at Milton Interchange given the significant growth planned for the area.
SV 1.2	Delivering north-facing slips at Chilton Interchange to provide a full movement junction. To enable more direct access to and from Harwell Campus from the A34, helping to attract investment.	The scheme was delivered and open to the public in November 2016. The updated area strategy will consider further improvements at Milton Interchange given the significant growth planned for the area.

SV 1.3	Delivering south-facing slips and investigating the provision of a new Park & Ride and bus priority measures at Lodge Hill Interchange, Abingdon. The provision of a full movement interchange will improve capacity and accommodate additional traffic from potential future development. A new Park & Ride will enable more trips into Oxford to be made by bus and alleviate congestion on Oxford's approach roads.	Funding has been awarded via Homes England along with S106 contributions in Abingdon to deliver the scheme. The scheme is currently in the design phase. The Lodge Hill Park & Ride is awaiting evaluation and review to establish commercial viability before a business case can be put together for this scheme.
SV 1.4	Developing Didcot Parkway station into a 'state-of-the-art' multi-modal interchange, to meet demand from new development and improved rail services. This includes a multi-storey car park, station access from the north, grade separation and a new station building.	The multi-storey car park was officially opened July 2019 and the cycle hub opened March 2021. We continue to work with the Didcot Garden Town team, further consideration will also be given to this policy in the updated Local Transport and Connectivity Plan once completed.
SV 1.5	Working with Network Rail and other partners to support the overhead electrification of the Great Western Mainline.	Electrification was delivered by end of 2017.
SV 1.6	Providing clear signage across Science Vale and establishing a clear hierarchy of routes to assist with way finding for all modes of transport.	This is being reviewed as part of several schemes in the area.
SV 1.7	Promoting the provision of a station at Grove, working with partners as part of a wider proposal to improve rail connectivity with Didcot and neighbouring areas, such as Swindon and Bristol, and in the longer term with East-West Rail to Milton Keynes.	On-going. Grove station identified as a potential infrastructure intervention in the Oxfordshire Rail Corridor Study (ORCS).
SV 1.8	Promoting an improved level of rail service at Didcot Parkway, seeking a minimum of four trains per hour to Oxford and Bicester, and securing future direct services to Birmingham and Heathrow airports as new rail infrastructure comes forward.	On-going. The ORCS has been completed to identify opportunities to enhance rail usage. The Oxford Phase 2 works have been identified as the critical next step to delivering the 2024 ambitions. A portfolio of interventions is required to deliver the 2028 ambitions, some of which can be associated with individual service enhancements, but the majority represent a comprehensive system upgrade between Oxford North Junction and Didcot.
SV 1.9	Promoting greater presence, accessibility and an improved level of rail service at Culham Station. To improve accessibility for the local area and Culham Science Centre and to encourage further business investment.	Ongoing. Supporting growth in seven Oxfordshire hubs by improving inter-connectivity is a key theme of the ORCS. The hubs identified include Culham.

SV 1.10	Promoting an improved and fully integrated public transport system with bus priority measures, linking Science Vale with innovation hubs and research locations in Oxford, in accordance with Science Transit and the Oxfordshire Bus Strategy.	On-going.
SV 1.11	Promoting the efficient transport of freight, using the most suitable routes as outlined in Oxfordshire's Freight Strategy and Oxfordshire Lorry Routes map.	On-going and to be picked up in the freight strategy part of LTCP.
SV 2.1	Delivering cycle route upgrades and maintenance on the existing network. This includes the provision of new routes, new substantial infrastructure (including bridges), branded signs and marketing measures to provide a high quality, safe and attractive network.	See cycle update below.
SV 2.2	Securing new strategic bus services and associated infrastructure between major residential sites at Didcot, Wantage & Grove, Wallingford, Abingdon, town centres / retail and the employment sites at Milton Park, Harwell Campus, Culham Science Centre, and Oxford. A minimum of two buses per hour during the morning/evening peak travel periods is required to provide a credible level of service.	On-going.
SV 2.3	Securing improvements to existing bus services and associated infrastructure between Oxford, Didcot, Wantage & Grove, Abingdon, Wallingford and employment sites in Science Vale.	On-going.
SV 2.4	Strengthening public transport links from Didcot Parkway through improved bus connections, including segregated priority sections of route, to improve bus reliability and journey times. Bus priority measures will be investigated on the A4130 from Science Bridge into Didcot, through the Valley Park development site located to the west of Didcot; and between Wantage & Grove, Milton Park and Didcot via Steventon.	On-going.
SV 2.5	Delivering the Wantage Eastern Link Road to support developments in Wantage and Grove and provide relief to central Wantage.	Wantage Eastern Link Road (WELR) is currently in the design stage and is currently estimated to be constructed by the end of 2022, however exact timescales are still being confirmed with the contractors. The various phases of WELR are being funded by money collected from Growth Deal, Homes England Marginal Viability Housing Infrastructure Fund and S106 contributions from developments in the vicinity of Wantage and Grove.
SV 2.6	Delivering Science Bridge and widening of A4130 to provide relief to Manor Bridge and support/ enable development in the area including Didcot A, NE Didcot, Valley Park and NW Valley Park.	The infrastructure proposed in this policy is being delivered as part of the Housing Infrastructure Fund (HIF) project. The project is estimated to be completed by 2024.
SV 2.7	Completing the A4130 Didcot Northern Perimeter Road part 3 (NPR3), to relieve congestion on local roads, and to improve access to Didcot from the east. Supports and enables Ladygrove East development.	NPR3 is in the preliminary design phase. This scheme is linked to the delivery of the Ladygrove East housing allocation. Exact timing for delivery is still being considered.

SV 2.8	Delivering Harwell Link Road section 1 (B4493 to A417) and Harwell Link Road section 2 (Hagbourne Hill) to improve access and connections to Harwell Campus and Didcot, reduce congestion on the local network, and protect villages from unnecessary through traffic. Supports and enables Valley Park development.	Harwell Link Road was completed and opened for use on 29th March 2018. The Hagbourne Hill scheme was completed in July 2016.
SV 2.9	Improving Harwell Campus entrance to facilitate additional trips into/out of the site (at the three main entrances on the A4185) and supplement the improved Chilton Interchange.	The Thomson Avenue entrance was completed in August 2020. There are no immediate plans for upgrades to Fermi Avenue and Curie Avenue. The requirement for mitigation at these junctions will be continually reviewed through transport assessments for subsequent growth at Harwell Campus and through continued liaison with the campus.
SV 2.10	Delivering improvements along the A417 corridor to address congestion, safety and the conflict between the volume of traffic, east-west travel, and access to the villages along this route. Elements of the strategy include junction improvements, bus stop infrastructure, footpath and cycleway improvements and speed limit reviews.	No change - the updated area strategy will consider this further.
SV 2.11	Delivering improvements at Steventon traffic lights at the A4130 / B4017 junction and improvements to Featherbed Lane. To remove the 'bottle-neck' and improve journey times to the A34, Milton Park, other Didcot employment sites and to Wantage & Grove.	Parts of Featherbed Lane were widened in 2015. Oxfordshire County Council are currently at optioneering stage and are appraising potential interventions for Featherbed Lane and associated junctions (including Rowstock roundabout). Preferred options are to be identified within an Options Assessment Report due for completion in March 2022.
SV 2.12	Reducing congestion at Rowstock roundabout through measures to increase capacity of the junction.	See above.
SV 2.13	Delivering improved Access to Culham Science Centre (CSC) Phase 1 (new road from CSC entrance to the B4015 north of Clifton Hampden) to improve connectivity between Science Vale and the Eastern Arc of Oxford and direct access to CSC.	The infrastructure proposed in this policy is being delivered as part of the HIF project. The project is estimated to completed by 2024.
SV 2.14	Promoting schemes to provide relief to villages within Science Vale which are affected by high levels of through traffic.	No change - the updated area strategy will consider this further.

SV 2.15	Providing improvements to the A4130 between Didcot and Wallingford to reflect the volume of trips between the two towns. The ability to move reliably and safely along this corridor is important, particularly in helping to support planned employment growth in Science Vale.	No change - the updated area strategy will consider this further. Some S106 monies have been taken towards a scheme in this area.
SV 2.16	Delivering improved Access to Culham Science Centre (CSC) Phase 2 - new river crossing (between Didcot and CSC) to improve connectivity between Science Vale and the Eastern Arc of Oxford and direct access to CSC. This scheme also increases capacity for north/south movements across southern Oxfordshire and reduces pressure on the A34, whilst increasing network resilience across the Thames floodplain.	The infrastructure proposed in this policy is being delivered as part of HIF project. The project is estimated to completed by 2024.
SV 2.17	Delivering capacity improvements on the B4015 between Access to Culham Phase 1 and the A4074 to improve connectivity between Science Vale and the Eastern Arc of Oxford.	The upgrading of this route is part of the scope of the optioneering exercise for the Golden Balls roundabout, this study is due to be commissioned late summer/early autumn 2021 and will take approximately 12 months to complete.
SV 2.18	Delivering capacity improvements at the Golden Balls Roundabout (junction of A4074 and B4015) to improve connectivity between Science Vale and the Eastern Arc of Oxford.	The optioneering exercise for the Golden Balls roundabout is due to be commissioned late summer/early autumn 2021 and will take approximately 12 months to complete.
SV 2.19	Delivering capacity improvements on the A4047 north of Golden Balls roundabout to improve connectivity between Science Vale and the Eastern Arc of Oxford.	The optioneering exercise for the Golden Balls roundabout is due to be commissioned late summer/early autumn 2021 and will take approximately 12 months to complete. The study will look at the need for bus priority measures north of the Golden Balls roundabout and consider the impacts of traffic growth along this corridor.
SV 2.20	Promoting capacity improvements to the A338 /A415 Frilford lights junction to improve accessibility between Wantage, Grove and Oxford.	The optioneering commenced in March 2021 and is due to conclude in April 2022. This optioneering exercise will consider all potential means of addressing the capacity issues at Frilford junction and the air quality issues within the Marcham AQMA.
SV 2.22	Providing new and substantially upgraded strategic cycle routes to Milton Park, Harwell Campus and Culham Science Centre through the Science Vale cycle strategy	See Cycle Strategy updates below.
SV 2.23	Securing safe and attractive walking and cycling routes as part of planning for new developments.	See Cycle Strategy updates below.
SV 2.24	Establishing links from new development to Public Rights of Way.	On-going.
SV 2.25	Establishing a bus route between Grove, Wantage, Milton Park and Didcot.	X36 linking Grove, Wantage, Milton Park and Didcot launched in January 2021.
SV 2.26	Promoting improved sustainable access to Culham Science Centre through enhanced bus connections and improved cycle routes to Abingdon and Didcot.	See Cycle Strategy updates below.

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