



Cranfield University Travel Plan

2018 to 2023

Department: Facilities

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Introduction

Scope

This Travel Plan aims to increase the travel choice for students, staff, visitors and associated business travel to and from the Cranfield campus, whilst reducing carbon emissions. The interactions with Cranfield University operations at Shrivenham Campus in particular the commute between the two campuses is considered. However the local commute to Shrivenham Campus is not.

The Travel Plan builds on the previous plan developed in 2012 and the work of the Travel Plan Working Group. The Travel Plan Working Group included Staff and Students with representation from across the University. The plan has also been developed with engagement with students and staff needing to travel daily to and from the campus (via stakeholder workshops and a campus wide travel survey). Aspects of business travel area also included: to and from the campus for research, teaching, conferencing and meetings. The Travel Plan is intended to have a five year lifespan, during which time regular monitoring will be undertaken.

Policy context

Planning policy NPPF

The National Planning Policy Framework (NPPF) emphasises the importance of sustainable transport as part of the planning system. Travel Plans are a requirement for all developments which generate significant amounts of movement.

<https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements>

CBC Local Transport Plan 3 (LTP3)

The local authority Central Bedfordshire Council has a Local Transport Plan (see <http://www.centralbedfordshire.gov.uk/transport/strategy/overview.aspx>) launched in 2011 and covering the period up to 2026.

Guidance for Travel Plans and Transport Assessments (2012)

This guidance document sets out Central Bedfordshire Council's requirements for Travel Plans and identifies when they are required in support of a planning application.

Other- Best practise

BREEAM

The University has a policy to develop new buildings to the Building Research Establishment Environmental Assessment Method (BREEAM) Excellent standard. This includes requirements for certain levels of sustainable transport provision in particular relating to:

- Number/frequency of bus services
- Proximity to amenities
- Cycling Facilities
- Car parking capacity (maximum)
- Having a Travel Plan

EAUC

The Environmental Association for Universities and Colleges offer guidance and support on a range of environmental issues including sustainable travel.

Objectives

The overarching aim of the Cranfield University Travel Plan is to improve the travel options for students, staff and visitors to and from the Cranfield campus, whilst reducing environmental impacts.

Objectives

The objectives of this Travel Plan are to:

- Reduce single occupancy car commuting from 59% to 53% over the next 5 years

This to be achieved by:

- Increasing car sharing
- Increasing public transport use
- Increasing cycling to and from campus
- Increasing walking to and from campus
- Reduce travel emissions and greenhouse gas emissions from University associated transport
- Make the Cranfield campus a more attractive environment to encourage student intake and improve staff working environment
- Support future planning applications associated with the University
- To improve travel links with MKU

Key issues

Staff commute

The Cranfield University Campus is located in a rural area. Most staff live within a 20 mile radius (as the crow flies) of the campus but are well spread out. This presents challenges for sustainable transport options such as car share, buses, cycling and walking. The surrounding roads are narrow, often used for “rat-running” and junctions have limited capacity. This can create traffic congestion at certain times.

Student Experience

The rural location presents challenges for students who wish to access more shopping choice and social activities offered by urban areas. It also provides opportunities to access nature.

Increased size of campus

The Cranfield campus is growing in size. The development of the campus with the new MUEAVI road connecting Martell House, its increased activity, and the new buildings along the road have effectively doubled distances for many working and studying on campus.

Links to Shrivenham and COTEC

Cranfield University has operations based at the MOD campus at Shrivenham and at an outstation on Salisbury plain where the Cranfield Ordnance Test and Evaluation Centre (COTEC) is based.

Greenhouse Gas Reduction

The University is currently targeting reductions in scope 1 and 2 greenhouse gas emissions. Travel emissions are scope 3. These will need to be investigated.

Site Description

Site location

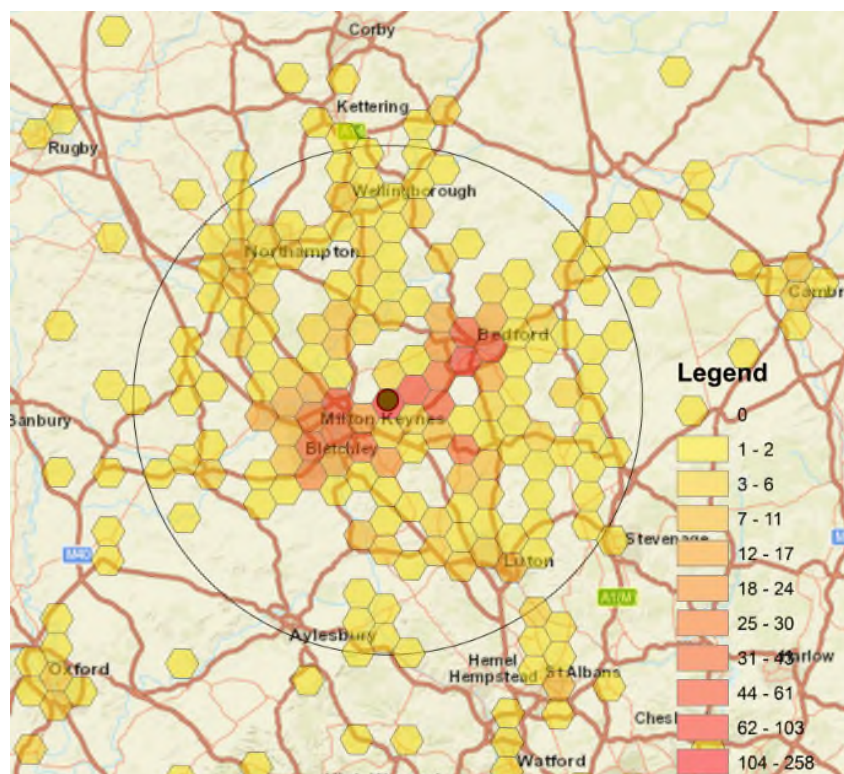
Cranfield campus is situated to the west of Cranfield, Central Bedfordshire, approximately one mile from Cranfield Village centre, and is bordered by the Cranfield Technology Park to the south and Cranfield Airport to the east (see Figure 1). The campus is located approximately 6 miles east of Milton Keynes and 8 miles south west of Bedford. Junctions 13 and 14 of the M1 are nearby and the A421/A428 dual carriageway provides a fast link to the A1. The University also has a second campus at Shrivenham, which although not directly covered by this Travel Plan, is intended to benefit from some of the wider Travel Plan measures affecting University Policy.

Organisation

Cranfield University is a renowned Postgraduate Institution specialising in Aerospace, Automotive, Energy, Environment, Management, Manufacturing, Security and Defence. It is also a major local employer with around 1,800 staff on the Cranfield campus and a student population that comprises over 3,000 Masters' and Doctoral students (full time and part time). In addition, continuing professional development delegates also attend the University for Courses throughout the academic year.

Catchment area

Most staff live within a 20 mile radius of the University. They are spread out but there is a concentration in Cranfield Village and along the corridor between Milton Keynes and Bedford. Equally students living off campus tend to be located in the same corridor. The location of staff is shown on the map below.



Above: Map of Cranfield University showing staff density data with a 20 mile buffer. The higher staff densities are located in Cranfield Village, Bedford and Milton Keynes.

Issues and Problems

Existing travel links

Road

Traffic flows

As part of the Masterplan a Transport assessment was carried out in 2017. The flow of vehicles coming onto the campus and technology park was measured.

Access	AM peak			PM peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
University Way	531	69	600	74	450	523
College Road	524	43	566	59	383	442
Folly Lane	101	14	114	27	99	126
Total	1156	125	1281	160	932	1091

Above: Traffic flows of vehicles coming onto the campus and technology park

Based on the expected increase in floor areas according to the Masterplan then the Transport assessment predicted an increase in traffic trips.

	Number of Trips (77,0000 sq.m)	
	AM peak	PM peak
Vehicles	514	438

Above: Predicted traffic flows onto/off campus (Source: Ref: cranfield-transport-assessment_tcm3-27112 tables 4.7 and 5.1)

Parking

The Transport Assessment also looked at parking. A survey in 2016 noted 2720 car parking spaces (81 of which were disabled) with a peak of 2,247 cars parked. The assessment suggests that the parking provision allowed for within the Masterplan would be a 40% uplift (3,146 vehicles) and that this is more than enough to satisfy the demand created by the Masterplan.

Rail

For the majority of University Students and Staff, the Milton Keynes Central Railway Station offers the greatest attraction in terms of rail travel, with an average of 8 services to/from central London (Euston Station) each hour. Milton Keynes to London fast train takes 35 minutes, slower trains are 58 minutes. Birmingham can be reached in 52 minutes and Manchester in 1 hour 38 minutes. This railway station is a 9 miles journey to the West by the shortest road route and is served by a regular bus service from the University.

Bedford and Flitwick rail stations to the North East and South East at 10 miles are a similar distance from the University. They also provide a service to London going to St Pancras rail station with rapid links to Europe via Eurostar. This line also links to Luton Airport Parkway in 15 minutes to 27 minutes. The fastest train from Bedford to London takes 38 minutes, slower trains are typically one hour.

The closest rail station is Ridgmont. A 5 miles journey to the South. This is currently only providing local journeys into Bedford and Milton Keynes. However there are plans to link this station with a new Oxford to Bedford service, which will eventually also link through from

Bedford to Cambridge. The Ridgmont to Oxford service is projected to open sometime between 2022 and 2024 and will provide one train an hour to Oxford with a journey time of less than one hour.

Bus

The two bus operators serving Cranfield Campus are Uno and Stagecoach. Details of their service are listed in the table below.

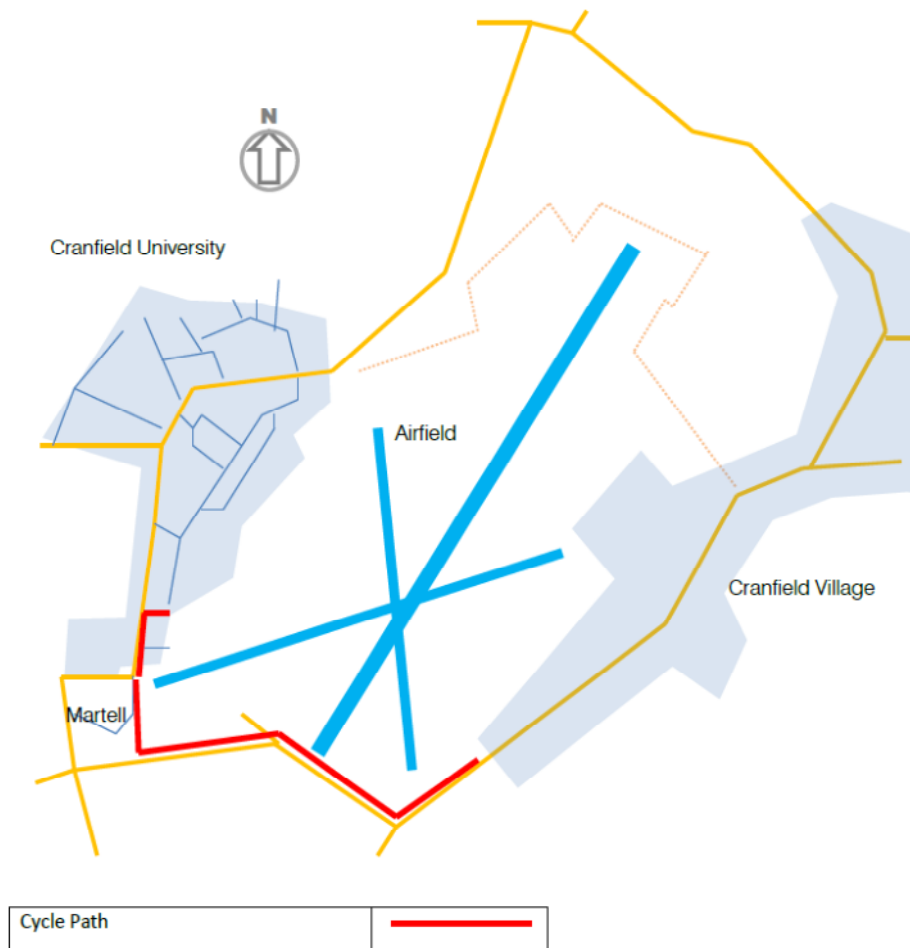
Operator	Bus	Route	Monday to Friday			Saturday	Sunday
			First bus	Last bus	Frequency	Service	Service
Uno	C1- Milton Keynes	Via Kingston	5.40	23.19	Every half hour	11	4
	C10- Milton Keynes	Via Newport Pagnell,	06.07	21.36	Every hour		
	C11 – Milton Keynes	Via Kingston				6	4
	C1- Bedford	Via Wooton	05.41	23.45	Every hour	9	4
	C10- Bedford	Via Marston Moretaine	06.54	21.09	Every hour		
	C11 - Bedford	Via Marston Moretaine				6	4
Stagecoach	53 - Bedford	Via Marston Moretaine	06.20	19.23	Every hour	12	8

Above: Bus services which serve campus including UNO bus and Stagecoach

Milton Keynes Coachway, a 4 mile journey west of the University, provides regular buses to London Luton Airport (40mins) and London Stansted (2 hours 15 mins) and changing at Luton to London Heathrow (1 hour 50 mins). There are also links to Cambridge (1 hour 49mins) and Oxford (1 hour 53 mins).

Cycle

A new cycle path was installed in partnership with Central Beds Council in 2014. This links the southern part of Campus with the south of Cranfield Village. The path is a shared cycle and footpath which for the majority of its route is alongside the main road.



Above: Map showing route of cycle path from campus to Cranfield Village

Foot

The cycle path from the south of Cranfield Campus to Cranfield village provide and safe walking route adjacent to but off the road. Otherwise, there are no footpaths along other road routes to the village or other nearby settlements. This is an issue for staff and students walking to campus from the north end of Cranfield or from Bourne End or North Crawley. There is a footpath from the north of Cranfield across the fields and around the runway to the north end of campus. However, this is not always easy walking depending on weather conditions.

Nearby facilities

Many facilities are available on the Campus itself. These include a bank, shop, post office, dentist, barbers, petrol station, restaurants, cafes, library, mosque, chapel, pre-school, laundrettes, nursery, sports centre with gym, Social Club, CSA (Cranfield Student Association), Amazon lockers, hotel, observatory, airport. The nearest doctor's surgery and chemist is in the village about 2 miles distant. There are also supermarkets, pubs, hairdressers, car servicing, car sales in the village.

For greater shopping choice the Kingston Shopping Centre in Milton Keynes is 6 miles distant and accessible by bus. There is a larger shopping centre in Central Milton Keynes 8 miles away and Bedford town centre is 12 miles.

Travel to and from Shrivenham

Changes to the work at Shrivenham will likely increase travel to and from Cranfield Campus. As this becomes clearer the sustainable options for this should be reviewed.

Travel to and from MKU

The new MKU University in Milton Keynes is beginning to take shape and as plans develop a travel plan for this new site will be developed. In the meantime, the following observations are made:

National cycle route NCN51 (aka Varsity Way) passes by the proposed site for MKU and runs through Cranfield joining with the cycle path to the University. However, for a proportion of its length it uses main roads which are unsuitable for safe cycling. This is the part of the route between the Milton Keynes redway network and Cranfield. A new off-road safe cycling route would provide a useful link between Cranfield University and MKU but would also link with the Open University and enhance this part of the NCN51 cycle route which also stretches to Oxford and Cambridge. It would also enhance the commuting opportunities for staff and students living in Milton Keynes travelling to Cranfield. There are rights of way running south west from the University towards Broughton in Milton Keynes with access over the motorway, which could potentially form the basis for such a route if they were surfaced.

The Uno bus service already operates a fast and regular service to Milton Keynes rail station from Cranfield campus. This could easily be modified to include MKU.

Campus layout and Masterplan

The campus is growing with a new road and new buildings being added to the south of the campus.



Above: Map of campus showing sites for new development (Ref: cranfield-masterplan-03_tcm3-27044)



Campus circulation

- Pedestrian (primary/secondary)
- Cycles (primary/secondary)
- Cars
- - - Buses

Above: Map showing access routes to campus including bus, cars, buses and pedestrian routes. Source: (Ref: cranfield-masterplan-03_tcm3-27044)

Existing infrastructure

Car parking

Historically car parking has been distributed across the campus in small car parks and with car bays along the main roads on campus. This is now changing with new larger car parks on the

periphery of the campus some of the spaces in the centre of campus are being removed. The disability car parking is distributed and close to buildings. Some of the smaller car parks are being designated for visitors. Car sharing priority spaces are also distributed close to buildings. Parking is now closely policed with a permit system.

Motorcycle parking

Motorcycle parking on site is limited. This results in motorbikes taking up car spaces or being parked in cycle parking facilities. There are ten space dedicated to Motorcycles. None of these are covered.

Cycling facilities

A survey of bikes parked on campus counted over 200 in 2017. The vast majority of these would be used for cycling around campus and in particular from the residential side of campus to the main technical site.

Cycle parking

In June 2018 there were 474 parking spaces for bikes with 358 of these under cover. This is greater than the total number of bikes on site. However, there are key locations particularly in the centre of campus but also in residential areas where bike parking is clearly not adequate. This is apparent by the number of bikes parked in inappropriate locations.

Location	Cycle spaces	Location	Cycle spaces
B62	4	Fedden	6
B30	6	Martell House	20
Sports hall (Outside entrance)	12	Conway house	8
Sports hall (by bins)	6	Medway court Unit 2	8
Lanchester (12, 15)	10	Medway court Unit 1	8
Lanchester (7, 16)	11	Medway court Unit 5	8
Lanchester (Block 14, 4, 5)	10	Medway court Unit 4	8
Chilver1	18	B50	6
Chilver 2	16	B52 East Side	10
B29	0	B52 West side	8
B57	4	CSA in front	20
B32/41	10	CSA by entrance	8
B39	16	Library	40
B33	16	C4D	8
B111	12	B83	10
B111	5	Outside 243	0
B122	4	13PPA	0
Mitchell Hall a	10	C320 AIRC	48
Mitchell Hall b	40	Sports Hall new car park	24

Above: Location and quantities of cycle spaces on campus

Showers/lockers/drying facilities

There are some 87 showers on campus. However, the vast majority of these are not available or suitable for cyclists to use.

There are 16 showers in the Sport Centre (12 male, 4 female). These have a suitable changing area with lockers. There are also 5 showers in B320 AIRC, two in IMEC and three in C146.

These all have changing areas but no lockers or if there are lockers, they are not easily accessible for cyclists.

Building	Number of showers
B19	16
B52	2
B95/96,	1
B146	3
B300	2
IMEC	2
B320, AIRC	5
B316 (Conway)	1

Above: number of showers with location

Disabled Access

The campus reviewed and implemented many improvements to disabled car parking and access to buildings in 2006 to 2009. Car parking in general is well distributed across the campus and there is disabled car parking close to most buildings. Kerbs were modified where possible to give easier access routes for wheelchairs. There are 67 disabled car parking spaces distributed across campus.

The University has a Disability Code of Practice (2009) which states that new buildings are designed and built to meet the latest standards of provision and that where practical and when reasonable adjustment is possible to upgrade existing buildings to accommodate disabled employees and students.

Existing measures

Car share

Car sharing is actively encouraged through the allocation of priority parking spaces and by subscribing the University to "liftshare.com" giving all staff and students access to a web based database of possible car share partners. This is promoted through the intranet and promotional events throughout the year. An emergency get you home scheme has also been introduced.

Uno bus service

The University tendered for a public bus service connecting the Campus with nearby villages, Milton Keynes and Bedford in 2013. This service is now well established and provides staff and students with a service with reduced fares, which is frequent and operates weekdays and weekends.

Intranet Travel Portal

Sustainable travel options are promoted on the University intranet with regular updates and links via social media are provided.

Cycle registration

A bike registration scheme was introduced in 2016. The scheme is linked to road safety with hi-viz vests given out free to those who register. However, its main purpose is to be able to identify owners of bikes, which have become a nuisance.

Bike repair and recycling

Bikes, which have been left by departing students, are collected at the end of the academic year. These are passed on to a local non-profit bike repairer who repairs and upgrades them for sale to new students to use. The same repairer is also funded to provide bike repair sessions for students.

Staff & Student Travel surveys/counts

Review of progress 2012 to 2018

Surveys

A survey of staff and students has been carried out every two years since 2012. These surveys have captured information on how people travel but also on their motivations and issues.

	Staff			
	2012	2014	2016	2018
Car single occupancy	76.6%	72.8%	69.3%	74.4%
Car share	13.7%	11.4%	13.7%	9.7%
Taxi	0.5%	0.8%	1.1%	0.4%
Bus	3.1%	7.3%	6.5%	8.2%
Motorcycle	1.2%	1.2%	1.5%	2.2%
Bicycle	4.2%	5.0%	4.7%	3.0%
Walking	0.8%	1.5%	3.0%	1.5%
Other	0.0%	0.0%	0.2%	0.6%
	100.0%	100.0%	100.0%	100.0%

Above: Year on year percentage of staff using different methods of transport to campus

	Students			
	2012	2014	2016	2018
Car single occupancy	29.7%	13.3%	14.0%	12.7%
Car share	9.7%	6.4%	4.8%	8.6%
Taxi	2.0%	2.7%	1.5%	0.8%
Bus	18.9%	25.9%	17.4%	34.0%
Motorcycle	0.3%	0.1%	0.3%	0.2%
Bicycle	10.7%	8.8%	10.2%	14.0%
Walking	27.9%	42.9%	51.5%	28.5%
Other	0.8%	0.0%	0.2%	1.1%
	100.0%	100.0%	100.0%	100.0%

Above: Year on year percentage of students using different methods of transport to campus

	Staff & Students			
	2012	2014	2016	2018
Car single occupancy	65.0%	43.3%	44.8%	52.3%
Car share	12.7%	8.9%	9.6%	9.4%
Taxi	0.9%	1.7%	1.3%	0.7%
Bus	7.0%	16.6%	11.4%	17.6%
Motorcycle	1.0%	0.6%	1.1%	1.4%
Bicycle	5.8%	6.9%	7.1%	6.8%
Walking	7.5%	22.1%	24.5%	11.1%
Other	0.2%	0.0%	0.3%	0.8%
	100.0%	100.0%	100.0%	100.0%

Above: Year on year percentage of total staff and students using different methods of transport to campus

	Commuters*			
	2012	2014	2016	2018
Car single occupancy	69.6%	57.8%	58.7%	59.0%
Car share	13.4%	11.1%	12.7%	10.5%
Bus	7.1%	18.6%	12.7%	18.0%
Motorcycle	1.0%	0.9%	1.3%	1.5%
Bicycle	6.0%	7.6%	8.0%	6.9%
Walking	1.8%	2.7%	5.0%	3.0%
Other (taxi, train, etc)	1.2%	1.3%	1.6%	1.3%
	100.0%	100.0%	100.0%	100.0%

Above: Year on year percentage of total staff and student commuters (*Commuters are staff, students and other who live off site). Bus usage has increased significantly.

Counts

Traffic counts have also been carried out periodically. These have distinguished between journeys to the campus as a whole and journeys specifically to the Technical Site part of campus. The latter essentially captures the movement of students from Residential part of campus to the Technical part where lecture theatres, laboratories and other facilities are located.

Count onto Campus	Apr 2013 Count (onto campus)	Nov 2013 Count (onto campus)	Feb 2016 Count (onto campus)	May 2017 Count (onto campus)	Oct 2017 Count (onto campus)
Cars (single occ.)	82%	75%	74%	82%	68%
Car Sharers	6%	7%	11%	6%	10%
Motorbike	0%	0%	0%	0%	1%
Bus	6%	11%	11%	7%	13%
Cycling	3%	4%	3%	3%	6%
Walking	1%	2%	1%	1%	1%
Other	1%	1%	0%	1%	1%
Total	100%	100%	100%	100%	100%

Above: Results of manual traffic counts onto campus

Count onto Tech Site (including from Residences)	Apr 2013 Count	Nov 2013 Count	Feb 2016 Count	May 2017 Count	Oct 2017 Count
Cars (single occ.)	38%	32%	31%	38%	50%
Car Sharers	3%	3%	5%	3%	7%
Motorbike	0%	0%	0%	0%	1%
Bus	3%	5%	5%	3%	9%
Cycling	1%	2%	1%	1%	4%
Walking	55%	58%	58%	53%	28%
Other	0%	0%	0%	1%	0%
Total	100%	100%	100%	100%	100%

Above: Results from Traffic count onto campus (including students living in campus accommodation)

Problems or improvements identified in surveys

The 2018 travel survey asked questions as to why people use the particular mode of travel they do and what might encourage them to switch to more sustainable options. The responses to these questions are summarised below.

2018 Survey responses

Why people use cars to commute to campus

The main reasons given were time saving, reliability and lack of alternatives. However there were a significant number of responses relating to comfort and ease, cost, personal safety and needing a car for business travel. These could potentially be addressed to encourage people to try more sustainable options.

Traffic problems on commute

A number of people experienced congestion on their commute to campus, including queueing at the Crawley Road junction and at Salford. Less than half experienced problems at least once a week.

Type of car used for commuting

The majority commute with a petrol car (59%) followed by diesel (37%) and hybrid/electric (4%). It is interesting to note that 24% are considering an electric or plug-in hybrid car, with two thirds wanting an option to charge their vehicle on campus.

Travel around campus

Most people were interested in safe walking routes (68%) with 60% interested in a driverless shuttle service, 41% in a pool bike system and 31% interested in a frequent Uno bus service through campus.

Car share

Whilst most people are aware that the University is part of the national Liftshare scheme a significant proportion (31%) are not. For those wanting to car share the biggest barrier is the lack of help in finding a partner (or lack of awareness of the help available) followed by a lack of flexible working, lack of incentive and lack of an emergency lift home scheme (there is one, but clearly this needs better promotion).

Bus

The biggest reason for not using a bus service is the lack of availability where people live. For those who can access a bus service the reasons for not using are the need for a more frequent, direct and reliable service with more convenient pick up points.

Cycling

The main reason for not cycling to campus is the distance. Otherwise the key issue are safety, and a lack showers and changing facilities on campus

Motorcycle

Motorcyclists would like to see more covered and secure parking areas on campus.

Walking

For most people walking is not an option as it would be too far. For those who have the option the main request is for improved footpaths with lighting.

Switching from single occupancy car use

The most likely switch is from single occupancy car commuting to car sharing, followed closely by public transport (train/bus) and then cycling.

Main reasons for not using a car to get to campus

The main one was lack of car followed by costs saving, environmental concerns, enjoying using the alternative and health and fitness.

What would encourage the use of alternative modes of transport when travelling for work?

Better links with other public transport services, more frequent bus service, a car share database for business travel, and better provision of video conferencing on campus.

Additional Comments on other issues raised

Lighting on cycle path to village

This has been discussed with CBC Highways who have insisted that the path itself cannot be lit without also lighting the road. This will require streetlights which are not possible given the proximity of the airport runway. The alternatives of bollards or low level lighting are also not feasible.

Lockers for cyclists

New buildings are incorporating cycle facilities as part of their specification. There are also lockers at the Sports Centre which are available for cyclists. However there is a need to improve the provision of lockers in existing buildings or at least at strategic locations within the campus.

More secure cycle parking

A number of covered cycle shelters have been installed in recent years. These have been sited within view of security cameras. However older shelters particularly in the residential areas are not well served by security cameras.

Safety issues on local roads

The cycle path linking to the south of Cranfield village has been a huge benefit. Further improvements like this will be sought as opportunities arise. In the meantime when cycling on the narrow and busy roads which serve the campus cyclists should make sure they are visible to other road users.

Access to repair facilities

This is something which would help a number of students who have limited access to the right tools or necessary experience. Repair workshops have been organised in the past and more are planned for the future. The feasibility of providing access to tools and an area for repairs will be investigated.

Lack of a bike rental scheme

Much effort has gone into investigating this. The overhead of managing such a scheme is an issue. However further research should be undertaken.

Reliability of bus service

The bus contract is being renewed providing newer buses. The provision of maintenance facilities on campus for the buses should also help with the turn round of buses which have broken down.

Lack of real time information for buses

New ticketing machines on the buses will allow real time information to be provided. More work is required to enable this.

Car share spaces not policed enough

The new car parking regime provides a more robust means of checking and also penalising cars parked in the wrong place.

Dedicated cycle paths on campus

This is something which needs to be looked at along with better walking routes.

Not enough cycle racks

There are over 400 cycle parking spaces on site. This should be more than enough for the number cycles currently used. However these hoops are not all in the right locations. Also as the use of bikes for getting around campus increases then more hoops outside all buildings will be required.

More cycle paths off campus

The new Air Park provides an opportunity to gain a cycle path to the North of the Cranfield village. Further opportunities to develop cycle paths linking further afield need to be explored with local councils and Sustrans.

Sheltered walking routes

Some of the new buildings provide cover which could be useful for certain walking routes. To provide covered walkways for other routes is likely to be expensive but if opportunities arise then these should be considered.

Safer crossing points over College Road

There have been discussions with Central Bedfordshire Council to look at safer crossings for College Road.

More dedicated parking for motorcycles required

More motorcycle parking has been provided next to Building 41 in the centre of campus.

Identifying new measures and improvements to existing

Walking measures

Improved footpath north of airfield to Cranfield Village

The existing footpath is a grass path across fields. The proposed Air Park development has allowed for this to be upgraded to a bridleway and paved footpath/cycleway. Timing will depend on the development of the Air Park but could happen within 5 years.

Car movements within campus reduced

The removal of car parking spaces from the centre of campus and relocation to the periphery is helping to reduce the car movements within the centre of campus. It is also by default increasing the amount of walking on campus. This shift in modes needs to be encouraged and monitored. The enforcement of car parking permit restrictions in the centre of campus would also ensure that cars parked on the residential part of campus are not moved and parked on the technical part of campus.

Improved key walking routes on campus

Safer, more convenient walking routes need to be defined and improved. Wayfinding, safer crossing points, pleasant and interesting surroundings would all enhance and encourage walking across campus. Pedestrian routes should be given priority within the campus.

Walking maps

Routes in and around the campus including out into the neighbouring countryside would help encourage more walking for health and well-being.

Disabled Access

The provision of dropped kerbs and the strategic placing of car parking spaces for disabled should be reviewed.

Cycling measures

Improved routes

Cycling around campus can be confusing with a number of cyclist resorting to cycling on footpaths. Clearer cycling priorities need to be worked out and cycling on footpaths discouraged unless those paths are specifically designated as for cycling and pedestrians.

Better facilities for commuters

The number of showers in key locations needs review. In most cases there are no or insufficient lockers and not enough drying or changing space. Funding needs to be sought to invest in better cycling facilities.

More hoops distributed around campus

For movement from one building to another there is a need for hoops at each building. This is in addition to larger covered cycle storage for longer distance cycle journeys.

Clearer guidance and training

A cycling policy for the campus needs to be developed to ensure improved security for bikes, safer cycling behaviour and improved support and facilities.

Better security measures

Cycle shelter security needs reviewing particularly in the residential area. The Bike Registration scheme needs developing further to deal with lost bikes.

Cycle loan scheme

The option for students and staff to hire bikes or access bikes on a long term loan scheme need to be further investigated.

Provision of pool bikes

Staff required to travel across campus on a regular basis should have access to a bike they can use. The feasibility for a scheme to encourage this needs developing.

Cycle maintenance

Cycle maintenance support for students in particular needs to be developed. Currently maintenance workshops are held every 2 months.

Government “Cycle to Work Scheme”

This not currently supported because of the administrative overhead. However this should be reviewed periodically to see whether the benefits now make it worthwhile.

Motorbike measures

Parking

Parking spaces have recently been added in the centre of campus. However there do not currently provide secure hitching points nor do they provide cover. This needs to be further developed.

Lockers

Lockers and drying area for wet weather gear need to be provided.

Incentives

People using a motorbike to travel to campus will reduce congestion on the roads. They will also help reduce carbon emission as motorbikes are usually much more efficient than cars. Centralised motorbike parking will help to incentivise the use of motorbikes.

Public Transport measures

Bus shelters

Central Bedfordshire Council have installed two new bus shelters at the main bus stop. The University installed one on the University Way bus stop. However a further bus shelter is required at the Innovation Centre bus stop.

Priority lane at main bus stop

Central Bedfordshire Council Highways have agreed to look at making the short road where the main bus stop is located a bus only route.

Taxis

Rapid electric chargers have been installed with taxi use in mind. Further opportunities to make taxi facilities available and easier to use should be investigated.

Real time displays

Central Bedfordshire Council have agreed to install real time displays on the main bus stop and another location on site.

Demand Responsive Transport

Uno are developing a Demand Responsive Transport (DRT) option.

Partnerships and Subsidy

Uno operate a bus service for Cranfield University with funding to ensure low staff and student bus fares. The contract for this service has just been extended. The relationship between Uno and the University is a close one with Uno based on site. A facility to provide basic maintenance space on site is being developed. Further collaboration and partnership working should be developed.

New services and routes

The opportunity to develop new routes and services should be continually reviewed.

Sustainable car use measures

Encourage electric cars

There are currently two rapid charging point on campus. The feasibility of more charging points for staff is also being developed.

Increase car sharing

The reorganisation of car parking on site provides the opportunity to incentivise car share. This will be through allocating car share only car parking in convenient locations nearer to where people work. Further work is also required to promote car sharing.

The use of video conferencing

Video conferencing facilities are provided both in meeting rooms and direct from the desktop. All staff on the Cranfield Campus have Skype for Business installed with cameras and audio devices available for purchase at low cost. Use of conferencing facilities should be encouraged to reduce both business travel and traffic between the Cranfield Campus and Shrivenham, where staff also have access to conferencing facilities within meeting rooms and can request Skype for Business installation on university owned equipment.

Promotion and Management Measures

Communications strategy

A communications strategy needs to be developed. This should highlight existing and proposed measures.

Travel Plan Coordinator

The Travel Plan Coordinator role rests with the Energy & Environment Manager.

Ensure Travel Plan is approved by the Board for Energy & Environment

The Travel Plan was presented and approved by the Board for Energy & Environment in 2018. It will be reviewed on an annual basis.

Register Travel Plan with Central Bedfordshire Council

The Travel Plan will be registered via iOn Travel.

Maintain and improve travel portal

The existing travel portal on the intranet needs to be reviewed and updated. More information needs to be made available on the web site.

Targets

As for the previous plan the overarching target for Sustainable Travel has to be the reduction in single occupancy car use or commuting. Single occupancy car use causes congestion and increases both local and global emissions. For the previous plan the target was set for staff commuting to the Cranfield Campus. This was partly because the 2012 travel survey did not get a very good response from students. For this five year plan the target is set in terms of overall commute to the Cranfield Campus. This includes students and tenants living off site as well as staff.

The target is set for 53% single occupancy car commuting and significant reduction on the current level which has been relatively constant for 4 years. There was step change between 2012 and 2014 with the introduction of the Uno bus service and the new cycle lane to the village boosting bus use, cycling and walking. Since then single occupancy car use has not reduced. So to further reduce it over the next 5 years will be challenging. However small increases in car sharing, bus use and cycling should make it achievable.

Objective	2012	2018	Target 2023
Singe occupant car commuting	70%	59%	53%
Car share	13%	11%	14%
Motorbike	1%	1%	1%
Public Bus/Demand Responsive Transport (DRT)	7%	18%	20%
Cycling	6%	7%	8%
Walking	2%	3%	3%
Other	1%	1%	1%
Total	100%	100%	100%

Above: Outcome targets for model shift in transport measures by 2023

Implementation & timescales

Travel Plan Target	Measure	Responsibility	Date
Travel Plan Management and Promotion	Appoint Travel Plan Coordinator	Board for Energy & Environment	September 2018
	Develop Communication Strategy	Energy & Environment Manager	November 2018
	Improve Travel Portal	Environmental Coordinator	Ongoing
	Automatic vehicle, cycle and pedestrian counting	Energy & Environment Manager	August 2020
Increase walking	Car movements within campus reduced	Facilities	March 2019
	Disabled access review	Facilities	Ongoing
	Improved foot/cycle path north of airfield to Cranfield Village	Air Park Development	March 2022
	Improved key walking routes on campus	Facilities	November 2018
	Walking maps	Environmental Coordinator	December 2018
Increase cycling	Better facilities for commuters	Facilities	Ongoing
	Better security measures	Facilities	September 2019
	Clearer guidance and training	Environmental Coordinator	November 2018
	Government "Cycle to Work Scheme"	Finance	March 2019
	Improved routes	Facilities	March 2019
	More hoops distributed around campus	Facilities	September 2019
	Provision of pool bikes	Energy & Environment Manager	September 2019

Motorbike measures	Incentives	Energy & Environment Manager	March 2019
	Lockers	Facilities	September 2019
	Parking	Facilities	March 2019
Increase use of Public Transport	Bus shelters	CBC	September 2019
	Demand Responsive Transport	Energy & Environment Manager	September 2019
	New services and routes	Energy & Environment Manager	March 2020
	Partnerships and Subsidy	Finance	March 2022
	Priority lane at main bus stop	CBC	December 2018
	Real time displays	CBC	November 2018
	Taxis	Energy & Environment Manager	March 2019
Sustainable car use	Review options to improve car share and encourage electric cars	Energy & Environment Manager	March 2019

Above: Implementation and timescale with action measures and responsibility

Monitoring & Review

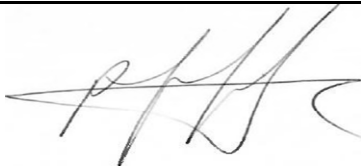
Surveys

The University is committed to having a staff and student survey travel survey every two years. This is supplemented with manual traffic counts at least twice a year. The latter should be supplemented or replaced with automatic traffic logging as soon as practical.

Review progress

The progress of the Travel Plan is to be reviewed by BEE annually. Also a report is to be submitted to Central Bedfordshire Council as required via iOnTravel.

Document Control

Document Title	Travel Plan
Document no	CU-ENV-PLAN_01
Version no	2.1
Originator name/document owner	Gareth Ellis, Energy & Environment Manager
Professional Service Unit/Department	Energy & Environment Team, Facilities
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Date of last review and version number	June 2021 (v.2.1)
Date of next review	June 2022
Standards Reference	ISO14001
Signature	
Name	Professor Phil Hart
Title	Chair of Board for Energy & Environment

Document Review

Version	Amendment	By	Date
2.1	Added 'MKU: Improve travel links to MKU (Milton Keynes University campus)	Gareth Ellis	28.06.21