

JLL Design and Build

Caterpillar UK Ltd

Transport Statement

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1. Introduction

Arup has been commissioned by JJL Design and Build (the Applicant) to provide a Transport Statement (TS) to support planning applications for the expansion of car parking facilities at the Caterpillar UK Ltd facility in Desford, Leicestershire.

There are currently 880no. spaces in the current main car park at Caterpillar. The car park is currently oversubscribed, particularly at shift changeover times. The effective use of the car park is also affected by a poor circulation pattern, with all aisles signed to operate in the same direction, this creates a poor arrival experience and congestion and delay at shift ends as vehicles use the same routes to exit the car park. Also, the majority of current spaces are 2.4m x 4.8m which can make accessing a space difficult.

It is anticipated in 2025, additional staff will be recruited to support new manufacturing activity at the factory.

The proposed car park expansion involves the creation of 332no. additional spaces provided in three cells located at the north and south of the existing facility. The scheme also includes a proposed reconfiguration of circulation and the creation of two new exits to improve the parking experience for staff and visitors.

The proposed development will look to improve the experience whilst also enable new electric vehicle, improved accessible spaces and electric vehicle charging and a new cycle store.

The purpose of this report is to demonstrate that the proposed car park expansion will not result in a significant material effect on the transport network. The traffic associated with the additional car parking is predominantly comes to/from the factory already. No additional industrial floor space is proposed as part of this application.

This application aligns with similar planning applications that were awarded consent in 2012 and 2015, that were never implemented.

This Transport Statement is accompanied by a Framework Travel Plan which indicates how Caterpillar supports transport as part of the proposed development.

1.1 Background

The Caterpillar site at Desford is dedicated to the assembly of small construction machines, typically used on building and construction. It is located to the south of the village of Desford and west of Leicester in a relatively rural location. The surrounding area is dominated by other industrial uses including a logistics depot and greenfield land. The site access is from an established point of access along the eastern boundary. The location of the site is shown in Figure 1.

Feedback from Caterpillar and analysis undertaken by Arup identifies that the site currently operates over the theoretical car park capacity. The additional spaces are required to accommodate increased activity on existing production lines and to provide car parking with EV charging points. The application also improves the disabled parking provision and a new cycle parking facility.



Figure 1: Site location

1.2 Planning context

Caterpillar UK Ltd was granted full planning permission (ref 12/00335/FUL) in May 2012 for the formation of a new car park, internal access road and relocation and alteration to earth bunds.

The consent was never implemented and in 2015 Caterpillar submitted a further planning application (ref: 15-00554-FUL) to retain the existing car park and enlarge to accommodate a further 276 car parking spaces.

The proposed works included the following;

- Formation of 276no. car parking spaces within the greater area of the existing car park.
- Internal site vehicle route alterations.
- Re-surfacing and re-lining of car park.
- Improved parking facilities for staff.
- Re-instatement of landscaping where required.

In the planning committee report for the application, it was noted:

'Desford Parish Council object to the scheme on the grounds that the provision of additional car parking spaces and the intended change in shift patterns within the site would result in an increase in vehicular traffic at peak times on already congested roads.'

The Caterpillar complex is not well served by public transport infrastructure and its rural location further limits the transport choice options available to employees. A majority of employees therefore travel by car which is not a sustainable transport. However, there have been recent improvements to enable better access of employees to the public transport network by the provision of a footway from the site to bus stops on Leicester Road (A47) and Caterpillar has produced a Green Commuter Plan (GCP) which is being developed in consultation with Leicestershire County Council which seeks to

promote more sustainable travel modes/options to the site and reduce the dependence on single car occupancy in the future. Ongoing monitoring and evaluation of the initiatives within the GCP are to be undertaken to identify uptake and potential further improvements to increase the sustainability of the site in transportation terms in the future.

*Leicestershire County Council (Highways) has considered the objection. Whilst they acknowledge that certain road junctions on the road network in Desford would appear to be taking more traffic than they are designed to which leads to some queuing at busy times, the Highway Authority considers **that the impacts of the development are not severe and therefore raises no objection to the scheme and no highway works are required** to be carried out to mitigate any highway impacts.'*

Plannign consent was awarded on 5 August 2015.

The scheme submitted as part of this planning application aligns with the 2015 application which has ever been implemented. Therefore, the principle of development has historically, been supported by the highways authority, in principle.

1.3 Structure of this report

To articulate the assessment of proposals in transport terms this report covers the following:

Section 1 – Introduction

Section 2 – Planning policy context

Section 3 – Existing transport networks

Section 4 – Overview of current car park

Section 5 – Trip making

Section 6 – Proposed car park

Section 7 – Development impact

Section 8 – Summary

2. Planning policy context

To demonstrate alignment with national and local policy the proposals have been revised against relevant transport policy documents.

2.1 National policy

Relevant national planning policy is contained within the National Planning Policy Framework 2021 (NPPF) and DfT Circular (01/2022).

2.1.1 National Planning Policy Framework (NPPF 2023)

The revised National Planning Policy Framework (NPPF) was published in 2023 and sets out the Government's planning policies for England and how these should be applied. It prepares a framework in which locally prepared plans for development could be produced.

Core planning principles relevant to the proposed development are outlined below:

111. Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe

112. Within this context, applications for development should:

1. Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment for bus or other public transport services, and appropriate facilities that encourage public transport use;
2. Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
3. Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
4. Allow for the efficient delivery of goods, and access by service and emergency vehicles; and
5. Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

113. All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.

This TS will demonstrate that the development proposals take provide improved facilities for the needs of people with disabilities and for cycling trips. The design also enables electric vehicle charging and therefore addresses NPPF requirements.

2.2 Local policy

Relevant local planning policy is contained within Leicestershire County Council's *Local Transport Plan (2011-2026)* and Hinckley & Bosworth's *Draft Local Plan (2020-2039)*.

2.2.1 Leicestershire County Council Local Transport Plan (2011-2026)

This Transport Plan sets out how Leicestershire County Council intend to manage and develop the county's transport system and the actions that they will take. The plan seeks to ensure that transport plays an important role in helping Leicestershire become a more prosperous, safe and attractive County. The Plan outlines six strategic transport goals:

- *Goal 1: A transport system that supports a prosperous economy and provides successfully for population growth.*
- *Goal 2: An efficient, resilient and sustainable transport system that is well managed and maintained.*
- *Goal 3: A transport system that helps to reduce the carbon footprint of Leicestershire.*
- *Goal 4: An accessible and integrated transport system that helps promote equality of opportunity for all residents.*
- *Goal 5: A transport system that improves the safety, health and security of residents.*
- *Goal 6: A transport system that helps to improve the quality of life for residents and makes Leicestershire a more attractive place to live, work and visit.*

The Plan is assisted by a Long-term Transport Strategy which explains the vision and aspirations for Leicestershire's transport system.

2.2.2 **Hinckley & Bosworth Local Borough Council Draft Local Plan (2020-2039)**

The Local Plan which builds on the current 2006-2026 Local Plan, aims to set out the vision and objectives for the growth of the borough up to 2039. The plan aims to:

- Have the right facilities, housing, and infrastructure in the right places.
- Support the local communities by addressing the needs and opportunities of an area.
- Help support the growth of the local economy and tourism.

The Local Plan is made up of a series of documents, with supporting maps where relevant, which help to achieve the above, including the four key development plan documents. DPDs outline the council's policies for development within the borough, carrying the most weight for making decisions on planning applications. Core planning considerations related to the proposed car park expansion are outlined below:

PMD01 High Quality Design

e) all elements of the development are designed with climate change in mind, maximising opportunities for active travel and sustainable transport methods to help reduce car dependency, renewable and low/net-zero carbon energy technologies, including electric vehicle charging points where feasible, use of sustainable and low-carbon materials where feasible, building in flexibility to respond to change, and mechanisms for reducing energy consumption within buildings.

HT01 Highways and Transportation

Development proposals will be supported where the applicant has demonstrated:

C) That new sustainable transport infrastructure is well designed, integrated with the Green Infrastructure and contributes towards making high quality places; and

Dii) the residual cumulative impacts of development on the transport network are not significant.

This TS will demonstrate that the development proposals support the needs of the factory and economic development and will provide improved facilities for cycling trips, provide electric vehicle charging facilities therefore making it compliant with local policy.

3. Existing transport networks

This section provides an overview of current transport provisions at the Caterpillar site near Desford.

The surrounding area is dominated by other industrial uses including a logistics depot and greenfield land. The main site access. The main access into the Caterpillar site is from an established point of access along the eastern boundary from Peckleton Lane. This route provides direct access to the main car park.



Figure 2: Caterpillar UK Ltd Desford car park site access point

3.1 Walking routes

Due to the rural setting of the factory, there is limited footway provision on connecting highways. There are no pavements or pedestrian crossing points along the boundary of the site, making pedestrian access difficult. A footpath from the site to the A47 was installed in Autumn in 2013 in collaboration with Leicestershire County Council.

The implementation of a footpath from the site to Desford village has been discussed with the highway authority, however implementation dates have not been set yet. These footpaths would improve the connectivity to bus routes, as well as the safety of the pedestrians.

The closest pavements to the factory are found 330m north along Peckleton Lane. Footways are shown in blue in Figure 3.

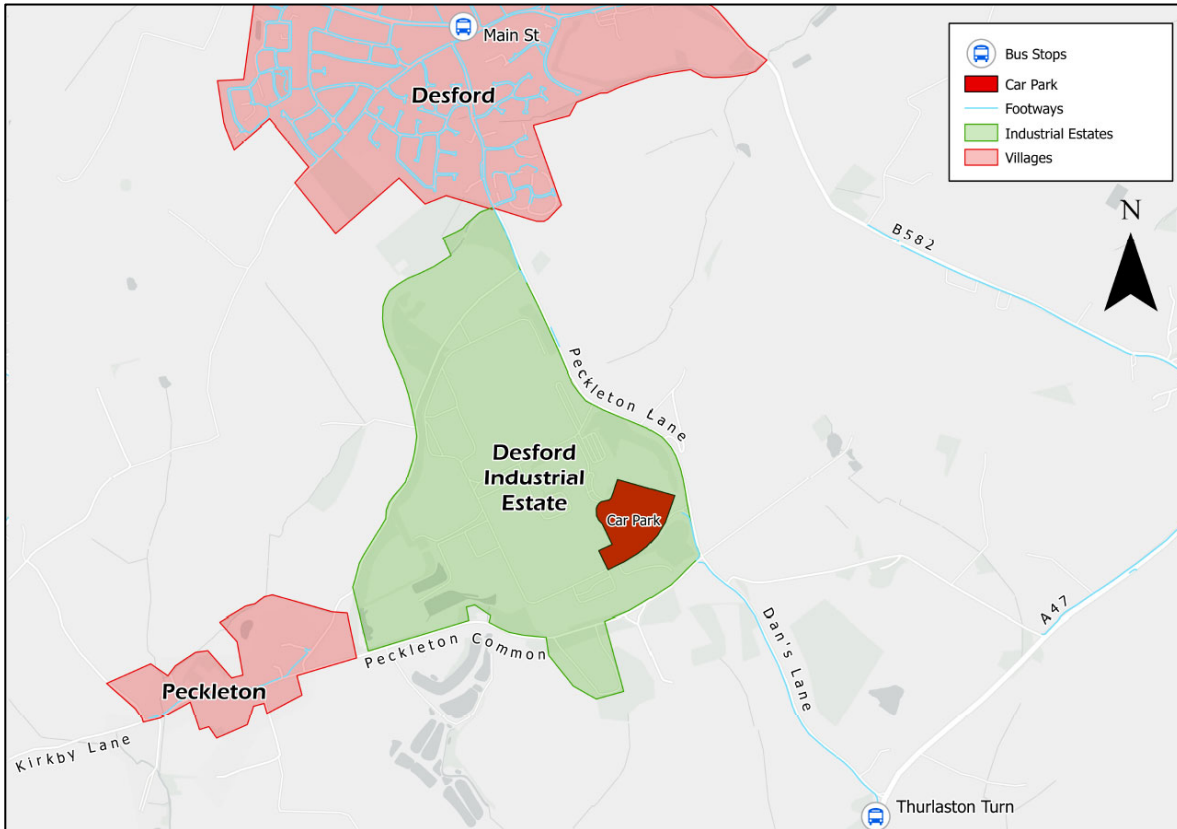


Figure 3: Surrounding footways

3.2 Cycling

There are no dedicated cycle routes in the vicinity of the factory, however there is cycle parking at the site and cycle paths to the northeast of Desford. The rural roads may be attractive to people with cycles as a combined leisure/commuting trip.

The site has a large catchment area within a 30-minute cycle which extends to Bagworth (north), Glenfield (east), Huncote (south) and Barlestone (west). The cycle catchment extends to many rural villages via country roads. Overall, the cycling isochrones presented in Figure 4 appear to be reasonable and generally align well with route times given using Google Maps.

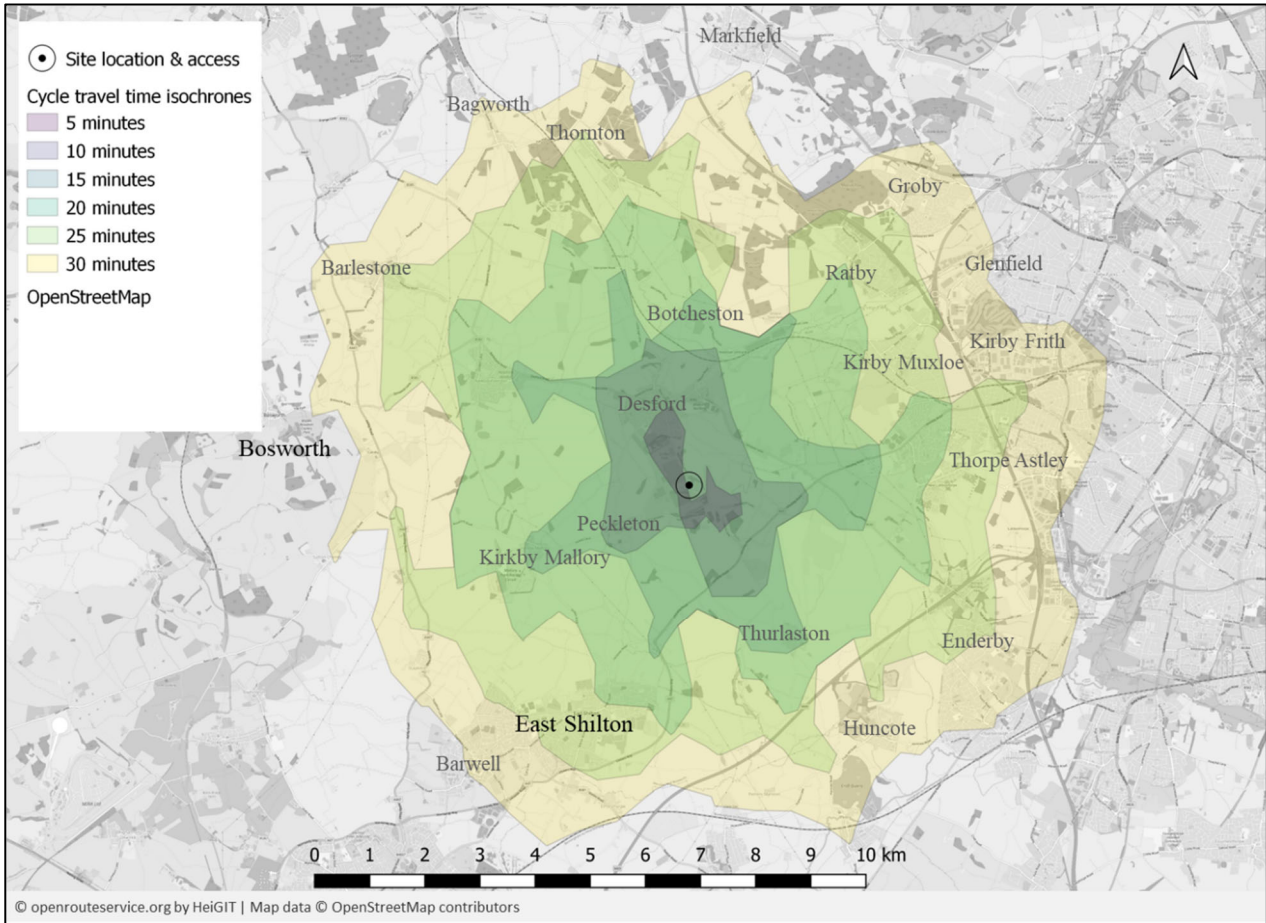


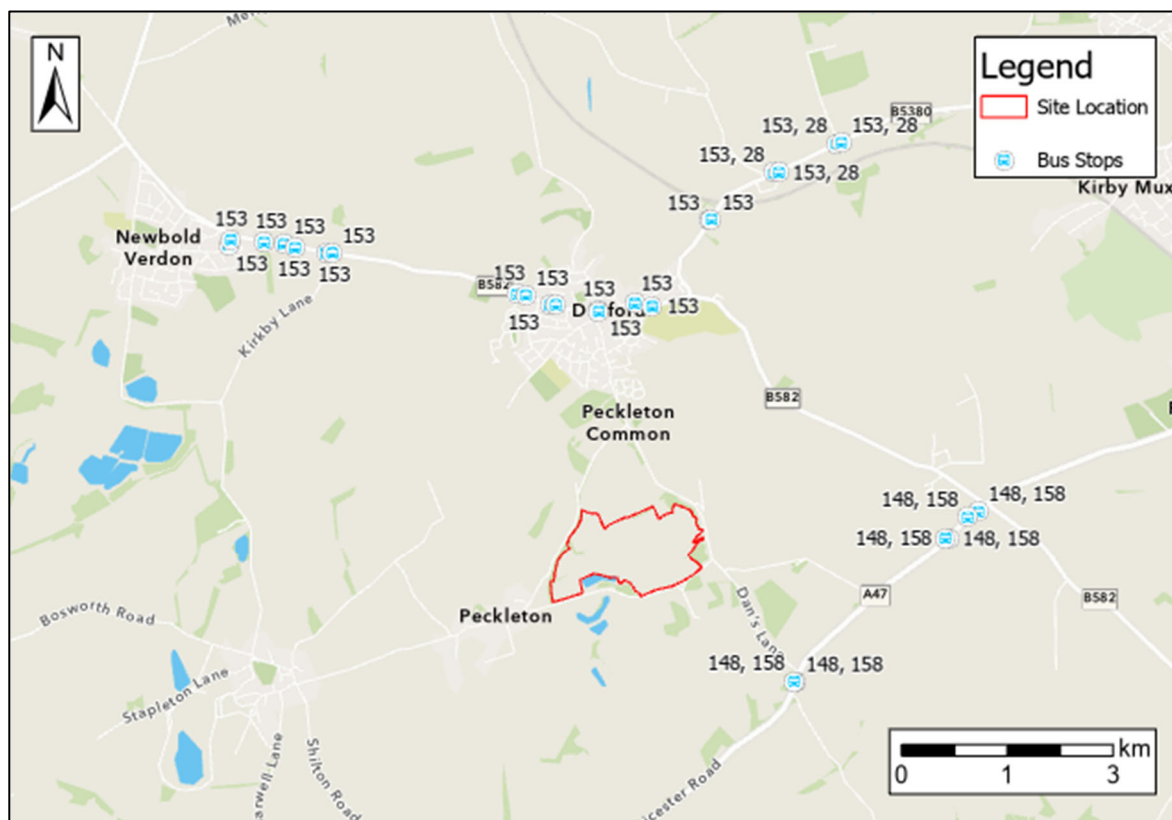
Figure 4: Cycling travel time isochrones

3.3 Bus

There are three main bus routes around the site, including the 153 bus to the North of the site travels from St Margaret's Bus Station, Leicester to Newbold Verdon every 40 minutes. To the East of the site, there are two bus routes: the 158 and 148 connecting the site to Leicester city centre from Hinckley every 30-60 minutes and Nuneaton every 15 minutes respectively.

Historically there was a works bus service and discussions have taken place regarding the diversion of Arriva public bus routes to the factory, however, these options have been discounted as they are unviable due to minimal uptake/interest from employees.

The locations of the closest bus stops are shown in Figure 5.



Access to bus services is currently limited, with no bus services coming to the factory. The nearest bus stop is approximately 1.7km southeast of the site, there is a gap in footway provision between the factory and Dan's Lane.

3.4 Rail

The closest rail station to the site is Narborough which is 11.6km southeast of the site. Hinckley and Narborough Stations provide national services, connecting to Birmingham New Street and Leicester Station. Leicester Station, which is ~18km East of the site, runs direct trains to Birmingham New Street and London St Pancras International in just under and just over an hour respectively. The rail station locations are shown in Figure 6.

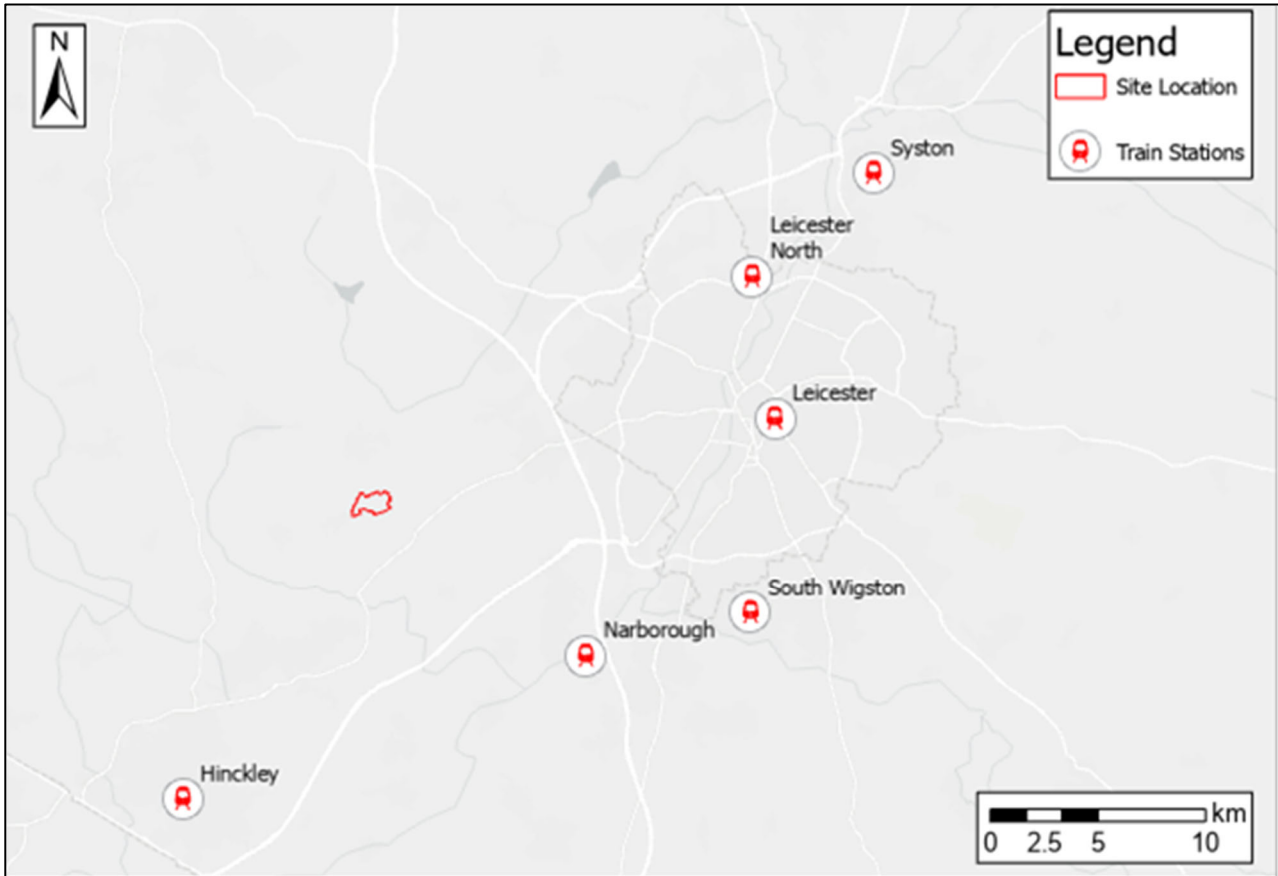


Figure 6: Train station locations

3.5 Vehicle access and car parking

Due to the rural location of the site and the low level of local public transport infrastructure, the majority of employees preferred mode of travel to and from work is by private car. The main access into the site is via the South Access Road from Peckleton Lane which provides access into the main car park. The site has two points of access onto the highway network on Peckleton Lane.

The factory is highly accessible to key road networks including the A147 4km to the South of the site, the M1 around 4km to the East and the A447 approximately 3.5km to the West.

3.6 Summary

There are gaps in footway connectivity surrounding the factory and limited access to public transport. However, there are opportunities for cycling due to its rural location, with rural roads connecting to surrounding towns and villages.

Overall, due to the rural setting of the site and shift patterns, suggests travel by car to the factory is preferred.

4. Overview of current car park

4.1 Existing car park

The existing car park is accessed from the factory access road from Peckleton Lane. It comprises 880no. spaces. The layout, entry and exit points and circulation pattern is shown in Figure 7.

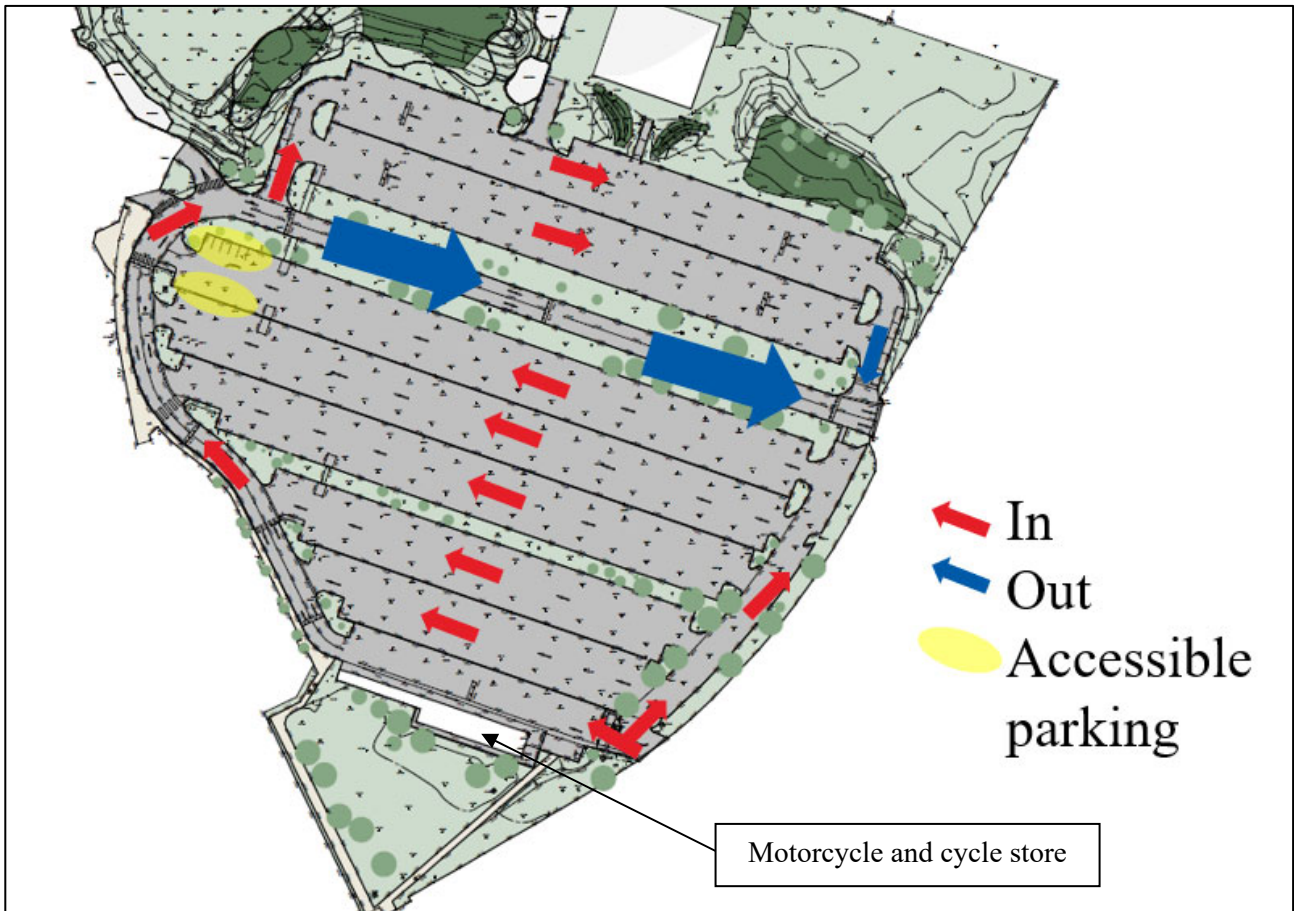


Figure 7: Existing car park entry and access routes

Entry to the car park takes place from the main access road into the factory, within the car park there are wide ($>6.0\text{m}$) aisles. The car park is a secure facility, with an automatic barrier supported by a guard hut and intercom system at both the entry points. This ensures access to the car park is monitored to ensure use for employees and pre booked visitors only. The current exit point has an automatic barrier that raises when a vehicle approaches. This is shown in Figure 8



Figure 8: Car park exit

The car park operates a one way system which makes finding a space more difficult and can lead to drivers having to exit the car park to then re-enter should they be unsuccessful in their initial attempt to find a space. The majority of spaces are design to old standards at 2.4m x 4.8m, this makes parking for larger/SUV vehicles difficult.

There are 12no. accessible parking spaces located at the closest point to the main access to the building. These spaces currently do not comply with design standards as they do not have the appropriate spacing.

Motorcycle and cycle parking provided in a combined open fronted shed at the south of the car park. This facility is in a poor state of repair and needs replacing.

The current number of car parking spaces does not satisfy demand at the site which means that employees often park in locations not designated for parking, which causes frustration and operational challenges.

5. Trip making

5.1 Shift times

To understand how the proposed car park expansion will accommodate current and proposed employee numbers at the factory, it is necessary to understand the change in trip making.

To inform the evaluation, Caterpillar has provided information on current and future shift patterns and employee numbers to enable a first principles approach.

The shift patterns and headcount for each are included in Appendix A.

5.2 Car mode share

A travel survey was undertaken by Caterpillar in 2011, this indicated that the predominant mode of travel to site is by car. Whilst the results in 2024 may be slightly different, the broad activity/feedback aligns with current activity. The mode share results are shared in Table 1.

Mode	Mode Share (%)	Number of employee responses (2011)
Car	93%	912
Cycle	3%	27
Motorcycle	2%	24
Walk	1%	9
Bus	1%	6
Total	100%	978

Table 1: Employee Mode of Travel

5.3 Current car park use

At peak operational times, the facility runs a 24 hour a day operation, therefore shift times start and finish across the day, spreading the activity on the local highway network.

To evaluate the parking demand, a first principles approach has been progressed, taking the head count for each shift, and applying assumptions to ascertain the demand.

It is assumed that everyone arrives approx. 15 minutes before and departs approx.15 minutes after their shift finishes.

We also know that a number of staff car share. Assuming a car occupancy of 1.1 people per car (similar home location and shift start/finish times are perhaps uncommon).

Figure 9 shows the accumulation of cars across the day for the current workforce.

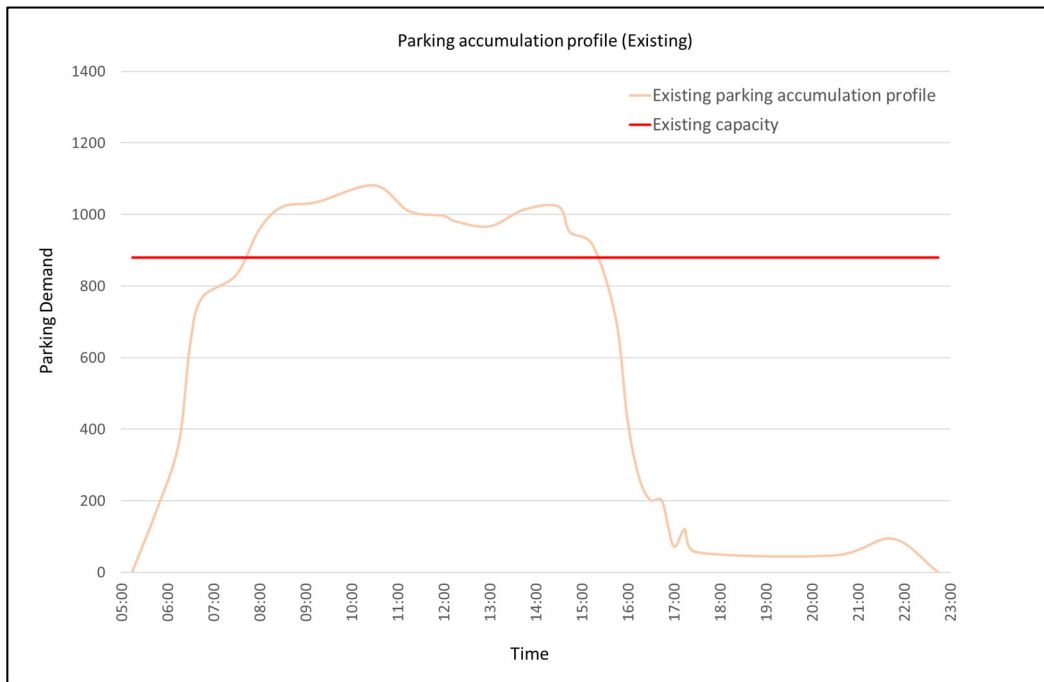


Figure 9: Existing car parking accumulation

This shows that the current parking facilities are over subscribed for most of the day. Whilst staff do eventually get parked the current pattern of activity sees vehicle parked errantly across the site and staff continuously expressing feedback about frustration with current provisions.

5.4 Proposed future car park use

In 2025 a new line called ‘Trident’ is going to come online, this will see the addition of 130 new members of staff to the factory. Without the addition of extra parking the pressure and negative experience of staff will be exacerbated.

Assuming the additional 332 spaces are provided and including the same assumptions for vehicle use the car parking accumulation profile in Figure 10 is realised.

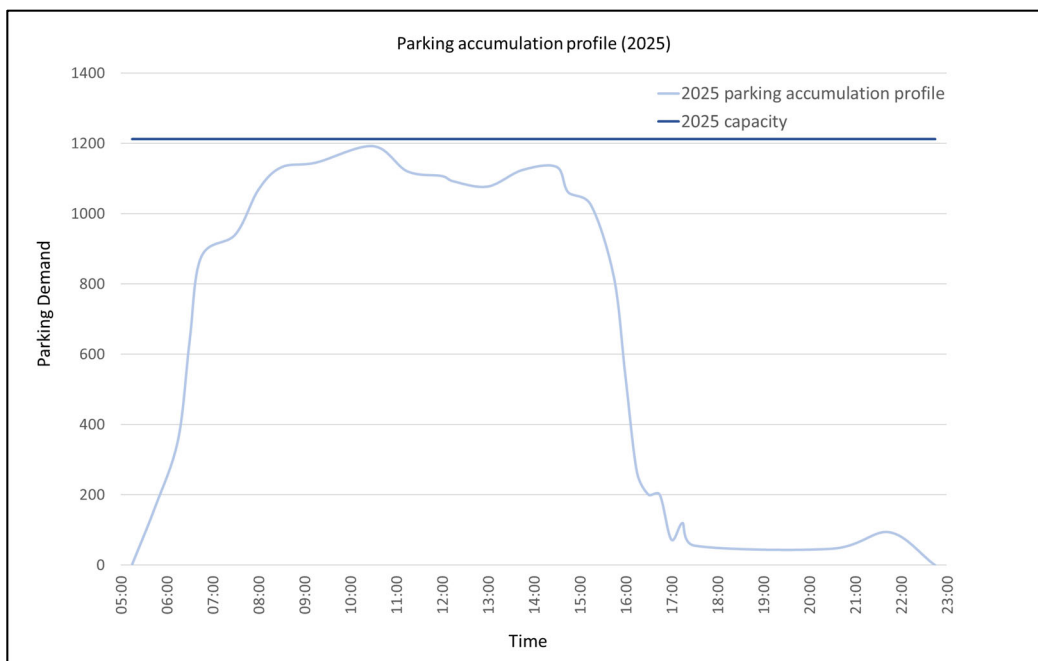


Figure 10: Proposed car parking accumulation

The analysis shows that car parking capacity will not be breached and that parking spaces for staff will be easier to find. This will lead to a much more efficient use of the site and a happier workforce.

6. Proposed car park

The proposed car parking layout is shown in Figure 11. Three new cells of parking are proposed, two either side of the sports pavilion at the north of the site and one cell to the south of the current car park.



Figure 11: Proposed parking layout

The key features of the new car parking includes:

1. Provision of an additional 332 parking spaces marked out at 5.0m x 2.5m.
2. 12no. accessible spaces marked out to appropriate design standards. Ten located at the current location and two located next to the path at the southern extent.
3. 11no Electric Vehicle charging spaces in the southern block.
4. New dedicated covered cycle parking building with 72no. cycles.
5. New dedicated motorcycle parking building with parking for 20no. motorcycles.

6. New signing (to be developed through detailed design stage) to enable improved circulation pattern within the car park.
7. Two new exit only barriers onto the main access road to reduce the pressure on the current single access point.

7. Development impact

The additional parking is primarily intended to accommodate and improve the experience for car drivers coming to the factory. The car parking profile has demonstrated that current provision does not address current and future requirements during shift pattern overlaps.

The proposed car parking extension is required for the following reasons:

- Caterpillar potentially underestimated the number of spaces required when the factory was first constructed.
- In parallel with providing more parking spaces to better manage current activity, the layout and design requires updating to meet modern requirements and to provide supporting facilities.

The additional spaces will therefore not significantly add to traffic numbers, the traffic impact will have been considered as part of the original planning permission for the factory.

The proposed additional parking aligns with previous planning permissions and the opportunity to improve facilities to enable improved accessible car parking, enable EV charging, improved circulation and access will support a more efficient use of the site.

The opportunity to provide a new dedicated cycle parking facility will enable and support more cycling trips to the factory.

It is therefore considered that the proposed development will not have a material adverse impact on transport operations.

8. Summary

This TS has set out the rationale for the requirement for additional car parking and supporting facilities at the Caterpillar factory located on the outskirts of Desford in Leicestershire.

The rural setting of the factory and shift working, along with limited public transport connectivity makes travel by other modes, than private car, difficult.

The factory continues to be successful and the current car park is not big enough to accommodate the current and forecast activity within the site.

It is proposed that the car park is increased by 332no. spaces to improve the user experience and in parallel improve access and circulation. It is also proposed that improved facilities are provided for accessible users, EV car charging, cyclists and motorcyclists.

The proposed scheme aligns with the principles of planning consent awarded in 2012 and 2015.

A Framework Travel Plan has been submitted with the application. This sets out approaches for workers to car sharing and cycling to the factory.

It is considered that the proposed facilities will not have a significant adverse impact on transport networks. There is therefore no reason why planning consent should be awarded in transport terms.

A.1 Shift patterns and headcount

Group	Shift Start	Shift End	Morning Break	Lunch Break	Heads	Comments
Hose (Friday)	06:30am	12:00pm		-	17	
Hose (Friday)	07:00am	12:30pm		-	17	
Hose Replen AM Shift	06:30am	15:30pm		11:45am	9	
CWL 90	06:45am	15:45/16:15pm		11:45am	7	
BHL Cab Dress	06:30am	15:30pm	08:45am	11:45am	35	
Inbound logistics 1	06:00am	15:00pm		12:00pm	10	
Stores	06:45am	15:45pm		12:00pm	11	
BHL Cab Trim	06:30am	15:30pm	08:45am	12	30	
BHL Carousel	06:45am	15:30pm	09:00am	12:00pm	35	
BHL Main Line	07:00am	16:00pm	09:00am	12:00pm	160	
Hose (Mon - Thurs)	06:30am	15:00pm		12:00pm - 12:30pm	17	
BHL Offline Subs	06:30am	15:30pm	08:45am	12:00pm	15	
CWL 91	06:45am	15:45/16:15pm		12:15pm	8	
Inbound logistics 1	06:00am	15:00pm		12:30pm	10	
CWL Cabs	06:45am	15:45/16:15pm		12:45pm	2	
Hose (Mon - Thurs)	07:00am	15:30pm		12:45pm - 13:15pm	17	
2nd shift	14:45pm			20:15pm	10	
Paint Shift 1 (Days) Mon - Thurs	6:00 AM	14:30pm	N/A (Continues Running)	N/A (Continues Running)	84	
Paint Shift 1 (Days) Friday	6:00 AM	11:00am	N/A (Continues Running)	N/A (Continues Running)	84	
Paint Shift 2 (Afternoons) Mon - Thurs	14:00	22:30	N/A (Continues Running)	N/A (Continues Running)	55	
Paint Shift 2 (Afternoons) Fri	10:45	15:45	N/A (Continues Running)	N/A (Continues Running)	55	
Paint Shift 2 (Nights) Mon-Thurs	22:00	06:30	N/A (Continues Running)	N/A (Continues Running)	55	
Paint Shift 2 (Nights) Fri	17:30	22:30	N/A (Continues Running)	N/A (Continues Running)	55	
BHL Captive	06:30am	15:30pm	09:15am	12:30pm	29	
Repair	06:30am	15:30pm	09:15am	12:30pm	30	
CWL 90X	06:45am	15:45pm	09:30am	11:45am	85	
CWL 91X	06:45am	15:45pm	09:45am	12:30pm	70	
CWL Cabs	06:45am	15:45pm	10:00am	12:45pm	45	
CWL 91X Subs	06:45am	15:45pm	09:45am	12:15pm	10	
CWL 90X Subs			09:30am	11:45am	15	
BHL Cab Trim - Quality	06:30am	15:30pm	08:45am	12:00pm	2	
BHL Cab Dress - Quality	06:30am	15:30pm	08:45am	11:45am	2	
BHL Main Line - Quality	07:00am	16:00pm	09:00am	12:00pm	13	
BHL Captive - Quality	06:30am	15:30pm	09:15am	12:30pm	4	
CWL 90X - Quality	06:45am	15:45pm	09:30am	11:45am	9	
CWL 91X - Quality	06:45am	15:45pm	09:45am	12:30pm	5	
CWL Cabs - Quality	06:45am	15:45pm	10:00am	12:45pm	2	
PDI - Quality	06:30am	15:30pm	09:15am	12:30pm	7	
Welders - Quality	06:30am	15:30pm	09:15am	12:30pm	2	
Welders - Quality	07:45am	16:30pm	09:15am	12:30pm	1	
PDA - Quality (Monday to Friday)	05:30am	15:00pm	09:30am	12:00pm	3	
Measuring Table - Quality	06:30am	15:30pm	07:30am	11:30am	2	
IQA - Quality	06:30am	15:30pm	09:00am	12:00pm	3	
Met Lab - Quality	6:00 AM	15:00pm	09:00am	12:00pm	1	
AQE - Quality	06:45am	15:45pm	09:00am	12:00pm	11	
DOT Team - Quality	06:45am	15:45pm	09:00am	12:00pm	3	
CQMS - Quality	06:30am	15:30pm	09:00am	12:00pm	3	
SQE/QE's - Quality	06:45am	15:45pm	09:00am	12:00pm	13	
Quality Managment	06:45am	15:45pm	09:00am	12:00pm	5	
Trident PD	06:30am	15:30pm	10:00am	13:00pm	10	
NEW TRIDENT SHIFT	07:00:00am	16:00			130	Approx. To come in Jan 2025
OFFICE STAFF	Arrive between 7 and 9am	Leave between 15:30pm and -18:00			300	Approx as work from home still