

PROPOSALS FOR A NEW MOTORWAY REST AREA ON LAND AT JUNCTION 16 OF THE M4, WILTSHIRE - RESPONSE TO SWINDON COUNCIL COMMENTS

APPLICATION REF: PL/2023/09142 – July 2024 (3728)

Eddisons have been instructed to advise on the highways and transportation issues relating to proposals for a new Motorway Rest Area (MRA), located on land at Junction 16 of the M4 in Wiltshire.

This note will set out a consideration of Swindon Borough Council's (SBC) formal consultation response dated 30th November 2023. The SBC comments are provided in **Appendix 1**.

The Proposals

The proposals seek to provide a new MRA comprising of 241 car parking spaces, up to 63 HGV spaces, coach and caravan parking, a facilities building and fuel filling facilities.

SBC confirm their support of the principle of delivering a facility that offers attractive overnight parking facilities for goods vehicles. SBC then go on to make comments regarding the proposals, which this note will respond to in the following paragraphs.

SBC have questioned whether the proposed MRA would become a 'Swindon gateway facility'. Moto's business model is centred around the provision of Service Areas which serve the needs of existing motorway users. Moto are the UK's largest operator of Motorway Service Areas (MSAs) and their vision is to transform the UK's rest stop experience and offer a safe place for motorists to rest, recharge and refuel, leading the way in customer experience and in the transition to clean, sustainable energy.

The proposals are for a MRA facility (effectively a mini MSA) which will only be signed from the M4. The primary purpose is to provide a rest break for people already travelling on the M4. As far as possible, there will be no signage from the local road network and there are no proposals to provide totem fuel price signing at the site entrance or from the local road network. This will ensure that the site and amenities are not promoted as a local road facility.

The facilities at the site will be typical of other 'at junction' Services and which enable motorists to take a break, refresh and refuel before continuing on long distance journeys along the Strategic Road Network. Approximately 20% of road traffic accidents occur due to driver fatigue, and these types of rest areas aim to improve road safety as well as tackle fuel (in particular electric vehicles) range anxiety for motorists travelling on the M4.

Due to their very nature, these types of facilities attract passing traffic from the SRN and do not attract significant levels of local traffic. This nature is further evidenced in the Circular with the methodology and precedent it sets for the assessment of these facilities, whereby, the parking demand is directly related to the mainline flow of traffic on the adjacent motorway.

Further reasons why MRA's do not attract significant local road trips include the typical pricing structure at services and the fact that the typical retail facilities which can be expected to be found within a service area are also likely to be available in locations which are more convenient to local residents. For example, the existing Costa Coffee's located in Royal Wootton Bassett, Lyiad Fields, Swindon and Coate; and the existing M&S Foodhall's located in Royal Wootton Bassett, Mannington Retail Park and Coate are likely to be more convenient to local residents than the same offering on the outskirts of Swindon at a motorway rest area.

Following comments from Wiltshire County Council, in their role as highway authority, the landscaping and screening buffer between the site and local road network (B4005) has been strengthened to further screen and shield the site to hide its presence from The south.

The signing of the MRA from the M4 motorway will be provided as stated within the Highways Agency document entitled '*Guide to the Signing of Roadside Facilities for Motorists on the Strategic Road Network in England*'. The location of signage internally will be provided in accordance with the standards laid down within the Traffic Signs Manual and Traffic Signs Regulations and General Directions (TSRGD) current at the time of detailed design.

It is therefore considered that the facilities within the site will be for passing motorway users only and are highly unlikely to attract anything other than a small level of local custom. Notwithstanding, as set out in the Transport Assessment, robust assumptions on the level of Local Road Trips and total Trip Generation have been incorporated into the assessments. In particular, it should be noted that the proposed traffic generation is based on nearby MSA's which is considered highly robust. Please refer to the traffic impact analysis which is provided in detail within Section 7 of the TA.

The need for the MRA in this location is also covered in detail within Section 2 of the Transport Assessment.

MRA Electric Vehicle Facilities

The electric vehicle car charging spaces and E-HGV parking spaces are extremely unlikely to attract local traffic unless the drivers are already travelling on the local roads in any event. The principle of EV charging is for people to leave the house with a full charge every day so EV charging facilities at a service areas are not focussed on providing a service for people who live locally.

It is important to note that it would not make economic sense for anyone living locally to choose to charge their vehicle at a service station. If you are close to home (i.e. based in Swindon), the best way to economically charge your vehicle is overnight, as lower power and slower charging extends the battery life and uses off peak electricity. At a cost of circa 0.7p per Kwh, slower, off peak charging at home makes the most economic sense. Services such as Moto are therefore focused on providing rapid charging to limit duration of stay and to facilitate users who are time sensitive (i.e. people stopping off on their longer journey to top off and increase travel range).

As such, it is considered that there will not be any additional material local traffic movements generated by the electric vehicle charging infrastructure provided at the MRA.

Parking Requirements

SBC stated they are unsure of the differences between an MSA and an MRA. Annex A of Circular 01/2022 sets out those differences as well as the minimum facility requirements for each facility. The facilities proposed align with an MRA.

One difference between an MRA and an MSA is National Highways prescribed signage policy from the motorway network. MRA signage is much simpler and therefore results in a lower trip attraction for vehicles travelling on the mainline. **Appendix 2** shows the prescribed signage journey of an MSA in comparison to an MRA. As can be seen, the allowed signage, which is the primary turn-in generator is significantly reduced for an MRA in comparison to an MSA. This results in lower turn-in rates as set out in the DfT Circular.

National Highways have confirmed that the proposed parking provision, of all types, meets the minimum requirements for an MRA as set out in Circular 01/2022.

Assessment of Traffic Impact

SBC have suggested that *'given the layout of the proposed site and the short 'run-off' from the roundabout, a shortfall in car parking can be expected to give rise to congestion on the access roundabout, with an impact on the safety and amenity of through-traffic on the B4005'*.

The traffic impact of the proposals have been based on an extremely robust basis. Section 7.8 of the TA sets out in detail how the traffic impact has been established. This has been based on the busiest month of the year, i.e. August. This is particularly onerous as peak month (August) trip rates are being applied to background traffic flows from March which are likely to be much higher at Junction 16 than corresponding August flows. As such, it is considered that this is very robust assessment.

Furthermore, the trip rates for the MRA proposal have been derived from the nearby MSAs at Membury and Leigh Delamare. These are both 'online' facilities as opposed to the proposals which is an 'offline' facility. Online facilities have a higher trip rates.

Notwithstanding the robust nature of the traffic impact analysis, it shows that the proposed Site Access will operate within its theoretical capacity. This is shown in Section 7.10 of the TA.

Non-Car Accessibility

SBC accept *'that the proposed facility is intended to offer services to drivers and that accessibility by non-car modes is limited to those who work at the site'*.

However, SBC have stated that they require a new footway along the southern boundary of the site to ensure a direct connection between the site and the existing footway network to the north of the site. This will be provided by the applicant and is shown **Drawing Number 3728-F06 Revision C**, appended to this note.

SBC have requested that the applicant consider improvements to the new nearby bus stops that cater for services between Swindon and Royal Wootton Bassett. This will be discussed with Wiltshire County Council.

Demand Management

SBC have stated that *'contains little evidence of any strategy to manage demand for the facility, particularly by goods vehicles'*.

MOTO are the country's leading operator of motorway service areas and are extremely experienced in managing demand on their portfolio of sites. The layout and circulation of the site has been prepared by MOTO's architects and is similar to a range of other motorway facilities that are operated by MOTO. Furthermore, the number of spaces proposed, for HGVs in particular, exceeds the level of HGV parking required for an MRA (Table 3.1 of the TA) and as such is adequate to meet the demand expected to be generated by passing HGV traffic.

SBC's request for a Logistics and Servicing Plan and a contribution towards the Swindon Local Logistics Partnership are noted and will be discussed with Wiltshire County Council. These can be subject to appropriate planning condition or legal agreement if necessary.

Committed Developments

SBC have stated the following with regards to the consideration of committed development:

'The treatment of committed development is set out at Section 7.5 and I note that development at Wichelstowe (the Southern Town Expansion) is included within the assessment. I appreciate that some of the traffic flow likely to originate from the full build-out of the strategic site has been accounted for within the 2023 Reference Case flows - estimated to be 24% of the planned total - but I am confused as to how the Wichelstowe traffic is accounted for in the derivation of design flows. Figure 7, when setting out the assumed committed development flows in the AM peak hour, shows Wichelstowe traffic reasonably reduced by this 24%. Figure 8 however, which shows the PM committed development flows, shows negative flows

attracted towards Wichelstowe. I have asked the applicant's Transport Consultant to explain this but to date, I have received no response.'

Further discussions have been held with NH to reach agreement on the traffic flows associated with the consented 4,500 dwelling Wichelstowe development area (App Ref: S/13/1524). Eddisons are happy to work with NH, Swindon and Wiltshire to ensure that the flows are accurate for purposes of assessing the cumulative impact at Junction 16. NH have recently shared revised Wichelstowe traffic flows which are currently being assessed by Eddisons. This revised assessment work will be shared with Swindon following the conclusion of the VISSIM modelling discussions with NH.

Trip Rates

SBC have stated that they *'question the reliability of this methodology and why a trip rate per floor area has not been considered.'*

As detailed above, the trip rates for the MRA proposal have been derived from the nearby MSAs at Membury and Leigh Delamare. This can be considered robust considering these are online MSA's.

This has been agreed as an acceptable way of establishing the traffic impact of the MRA by National Highways and Wiltshire Council.

Local Traffic Demand and Distribution

SBC have requested more clarification on the use of the 7% local traffic proportion and why the proposed distribution has been utilised.

This is covered in Section 7.7 of the TA and includes paragraph 7.7.3 which is as follows:

'During initial scoping discussions, a 5% allowance for traffic travelling along the B4005 was recommended. Subsequently officers at Wiltshire considered this to be slightly high, however, they also suggested an allowance should also be made for local traffic travelling to and from Royal Wootton Bassett on the A3012. As such, a 7% allowance has been made for Local Road Trips and this has been distributed to both the B4005 and the A3012 based on the current patterns of traffic on the local road network.'

As such, the use of 7% is considered appropriate and extremely robust in these circumstances.

In terms of its distribution, Paragraph 7.7.4 of the TA states that *'the proposed distribution for local road trips, based on the current pattern of traffic on the local road network, is shown in Figures 15 and 16 for the AM and PM peak periods respectively'*.

Summary

This note has set out a consideration of Swindon Borough Council's (SBC) consultation response.

It is concluded that the proposals are acceptable in highway terms subject to further evidence which will be provided following the conclusion of the VISSIM traffic modelling exercise which is currently under discussion with National Highways.

We would be delighted to meet to run through any further information required or clarification required.

Enclosures

Appendix 1 – SBC Consultation Response

Appendix 2 – Prescribed MSA vs MRA Signage Journey

Drawing Number 3728-F06 Revision C

APPENDICES

APPENDIX 1

Memo

To: Planning Services
From: Transport Development Management
Date:

Application Number: PL/2023/09142

Proposal: Outline application (with Access to be determined) for development of a new Motorway Rest Area (MRA) to provide up to 241 car parking spaces; up to 63 Heavy Goods Vehicle (HGV) parking spaces; coach and caravan parking; amenity building; fuel filling station; new roundabout access from B4005; and associated landscaping, infrastructure and ancillary works.

Location: Land at Junction 16 (M4), Swindon

Thank you for inviting Highways & Transport comment on the above application to develop land close to Junction 16 for a motorway rest area (MRA). The application is in outline, with the means of access to be determined.

The application is supported by a package of documents and I will refer to those where appropriate. Most relevant to my consideration of the proposals is the Transport Assessment (TA), Version 3, dated 3rd October 2023.

The application site is situated entirely within Wiltshire, as is the proposed access junction. I have not therefore considered the results of capacity assessment in any detail. Given however the importance of the B4005 as a link to the strategic road network from Wroughton and the new development in southern Swindon (Wichelstowe), I have made some comment on the adequacy of the access proposals. In respect of impact at Junction 16, I will make no detailed comment on the potential for impact other than a high-level assessment of the potential for congestion on the A3102 Great Western Way north of the motorway.

The TA, at Chapter 2, addresses the need for an MRA at this location. I support the principle of delivering a facility that offers attractive overnight parking facilities for goods vehicles but question the broader strategy underlying this proposal. I am unclear as to whether the facility is - or might be - intended to offer a Swindon gateway facility and whether that particular operating model might fundamentally impact on the assessment work presented in support of the proposals? If a gateway function is not an inherent element of the business model, I am concerned that the facilities on offer may lead to such a 'gateway' characteristic developing over time in any event. I would be grateful for evidence of the consideration of this potential effect and the potential benefits or disbenefits of the facility to Swindon Borough.

The description of the development at Chapter 3 of the TA is limited and does not assist me in understanding the potential for the development to be an attractor of trips in its own right. The Planning Statement advises that *'The amenity building would provide the necessary services that are needed to comply with the Department for Transport 01/2022 Circular's requirements for Motorway Rest Areas'*. The Circular states that hot drinks and cooked hot food is permitted at an MRA but I remain unsure as to how the amenity building might be utilised, beyond providing the toilet facilities mandated by the Circular. With a footprint of some 2,200m², the amenity building is only marginally smaller than the facility at Membury Services and I am assuming that a similar range of shopping outlets will be provided here, including potentially a modest high-end food retail unit.

It is worth noting too that the electric vehicle charging facilities and lorry-stop facilities may attract a wider user-base than just those passing on the motorway.

My reading of the Circular suggests that the difference between an MRA and a service area is the range of facilities on offer and I am unclear as to why this facility is classified as an MRA rather than an MSA. The relevance in the subtle difference in definition will become evident below.

Section 3.5 of the TA sets out the proposed parking strategy, with the Planning Statement confirming the intention to offer:

- 241 no. Car Parking Spaces;
- 62 no. Heavy Goods Vehicle Parking Spaces;
- 1 no. Heavy Goods Vehicle Parking Space (Abnormal Load);
- 6 no. Coach Parking Spaces;
- 7 no. Caravan Spaces; and
- 12 no. Motorcycle Spaces.

The proposal to deliver 62 goods vehicle parking spaces appears robust but I am unsure as to whether the function of the facility – potentially as a gateway facility to Swindon – is reflected in the calculations. In respect of car parking, the calculations at Appendix 2 to the TA confirm the values set out at Table 3.1 of the TA. The assessed demand for car parking, shown in Table 3.1 to be 226 car parking spaces, is seen to be 50% of the requirement for an MSA as set out in the Circular. Depending on whether the proposed facility effectively functions as an MSA, there may be a requirement to provide car parking at double the level proposed.

The parking demand assessment methodology set out in the Circular is clear and simple in its suggestion that parking demand is directly related to mainline flow on the motorway. Whilst I accept the principle of a correlation, I wonder whether there might be another methodology available to validate this assumption. The TA identifies at Section 2.6 that HGV parking facilities at existing MSAs/MRAs across the region are inadequate in their capacity. Does similar data exist for car parking? Given the layout of the proposed site and the short 'run-off' from the roundabout, a shortfall in car parking can be expected to give rise to congestion on the access roundabout, with an impact on the safety and amenity of through-traffic on the B4005.

I accept that the proposed facility is intended to offer services to drivers and that accessibility by non-car modes is limited to those who work at the site. That does not however mean that the needs of those who are reliant on travelling to the site on foot, by bicycle and by public transport can be ignored. The TA, at section 5.2, identifies the need to supplement the existing pedestrian infrastructure to provide a continuous route to the application site. It is stated (para 5.2.3) that the applicant is *'content to explore'* the provision of the missing footway that is identified by the applicant's Transport Consultant. I suggest that the applicant should be obliged to deliver this piece of infrastructure.

The TA concludes that the application site is accessible by bicycle, on the basis solely that some residential areas lie within a 40-minute cycle time and that the NCN45 is 2km from the site. I appreciate the limited opportunities to enhance the attractiveness and safety of cycling to the site but wonder whether the new footway identified above might realistically be provided as a shared footway/cycleway. On the matter of bus services, you may wish to consider whether it is appropriate to secure improvements to the two bus stops that cater for services between Swindon and Royal Wootton Bassett.

Chapter 7 of the TA presents the assessment of traffic impact and I need to clarify that the statement at para 7.2.2 is not accurate. At no point did I agree that the assessment of traffic impact should be limited to Junction 16 and the site access junction. Indeed, my response to the Screening Opinion stated that *'I have made it clear through the informal discussions to date with the developer's agent that the scope of the TA may – depending on the development make up – need to include assessment of impacts beyond Junction 16.'*

The TA considers traffic impacts but contains little evidence of any strategy to manage demand for the facility, particularly by goods vehicles. I would ask that a Logistics & Servicing Plan is submitted to indicate the way in which strategic demand for the facility, by goods vehicles, might be managed. On a related point, I feel it reasonable that a part of this strategy for managing demand includes a contribution towards the Swindon Local Logistics Partnership.

The treatment of committed development is set out at Section 7.5 and I note that development at Wichelstowe (the Southern Town Expansion) is included within the assessment. I appreciate that some of the traffic flow likely to originate from the full build-out of the strategic site has been accounted for within the 2023 Reference Case flows – estimated to be 24% of the planned total – but I am confused as to how the Wichelstowe traffic is accounted for in the derivation of design flows. Figure 7, when setting out the assumed committed development flows in the AM peak hour, shows Wichelstowe traffic reasonably reduced by this 24%. Figure 8 however, which shows the PM committed development flows, shows negative flows attracted towards Wichelstowe. I have asked the applicant's Transport Consultant to explain this but to date, I have received no response.

I dispute the contention (para 7.5.5) that *'... full 4500 dwellings may never be realised on the site due to changes which have occurred during subsequent reserved matters applications'* and consider the assumptions made regarding Wichelstowe traffic to be realistic, rather than robust.

In assessing the quantum of traffic flow attracted to the proposed MRA, the forecasting appears to be based on a 'trip rate per parking space' value, derived from other MSAs in the region. I question the reliability of this methodology and why a trip rate per floor area has not been considered. The suggestion is that the proposed facility at Junction 16 would generate 500 and 660 vehicle movement in the AM and PM peak hours respectively because the car park is smaller than that at Membury Services, which is a similar size in terms of built development and is seen to generate 1,470 movements and 1,960 movements in the AM and PM peak hour respectively. Establishing the likely quantum of vehicle traffic is critical and I do not believe that this has been done with any degree of confidence.

On the matter of potential impacts beyond Junction 16 and the proposed site access, Section 7.9 of the TA suggests that 7% of all traffic attracted to the proposed development will be 'local' and not originating on the motorway. This proportion is guided by a survey undertaken at an MSA in Ferrybridge. With no information either relating to the likely configuration of the proposed 'amenity building' or that at Ferrybridge, I am unable to assess whether the Ferrybridge facility is a reliable proxy for the proposed facility at Junction 16. I would ask that a more site-specific assessment is undertaken of the potential for local trip generation, taking account both of potential demand for charging infrastructure by residents and particularly businesses based in Swindon and more strategically, the gateway potential of the proposed facility.

Notwithstanding the accuracy of the 7% 'local trip' proportion or the doubts, set out above, of the total traffic that would be attracted to the proposed facility, Tables 7.10 and 7.11 of the TA suggest that the quantum of local traffic would be of the order of 36 vehicles in the AM peak hour and 46 in the PM peak hour. The distribution of these vehicle trips is shown in Figures 15 and 16, which indicate approximately 50% of local trips to originate to the southeast of the facility (Wroughton and Wichelstowe), 35% from Swindon in the north and 15% originating in Royal Wootton Bassett. The rationale behind this distribution is not explained, particularly when different proportions might reasonably be expected for car and HGV journeys.

Assessment of the operation of the proposed new access junction shows it to be operating close to its effective capacity in 2033. I set out above my concerns for the robustness of the trip number forecasts informing that assessment but would further point out that the fourth arm of the proposed roundabout is assumed to serve no traffic-generating development. As that land lies within Wiltshire, I will leave you to form your own view as to whether that is a realistic long-term assumption.

I offer no comment on the assessment of impact at Junction 16 but would ask that the effects of a material increase in HGV turning movements is considered from a design perspective. Specifically, I would hope that any effects on lane use and lane width around the gyratory is fully assessed from a safety perspective.

Whilst not directly part of my remit, I have been asked to raise the issue of drainage and a request that assessment of the drainage strategy for the site recognises the strategic drainage needs of the nearby Wichelstowe urban extension.

In conclusion, I have a number of concerns for the proposals. Fundamentally, I am unsure as to how the facility is intended to function and what role it might play in managing freight movement to and within Swindon Borough. On the basis of the applicant's business model for the site and whether the site might realistically be considered an MRA or an MSA, more specific concerns are:

- a) Whether adequate provision is made for the parking of cars and goods vehicles;
- b) Whether committed development has been adequately and accurately accounted for in assessment of impacts;
- c) Whether 'local' trip-making is adequately represented in the assessment of the proposals;
- d) Whether the potential for all traffic generation is accurate, given the role of the facility as an MRA or an MSA;

Until further information is provided to resolve the concerns set out above, on behalf of Swindon Borough Council I have no option but to recommend that the application is **refused**.

Please note that the comments made here represent Officer opinion and cannot be seen to prejudice Swindon Borough Council's formal determination in relation to any application or planning matter.

Kind Regards

Gerry

Gerry Prodöhl
Principal Transport Manager

Asset & Transport Development Management
Swindon Borough Council
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APPENDIX 2

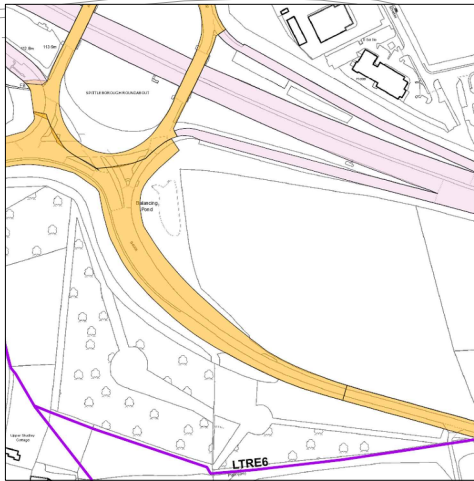
	Stage:	1	2	3	4	5
Motorway Service Area			 Or 	 Or 		
Motorway Rest Area		N/A				
	Location of Sign:	Entry to Motorway	Approach to MSA - Remote Distance Sign	Approach to MSA - Advanced Directional Sign	Diverge	On exit

DRAWINGS

Z:\projects\3728 MOTO Swindon\CAD\Croft Drawings\3728-Mastercopy.dwg



NORTH SOUTH AERIAL VIEW



ADOPTED HIGHWAY PLAN

SPITTLEBOROUGH ROUNDABOUT

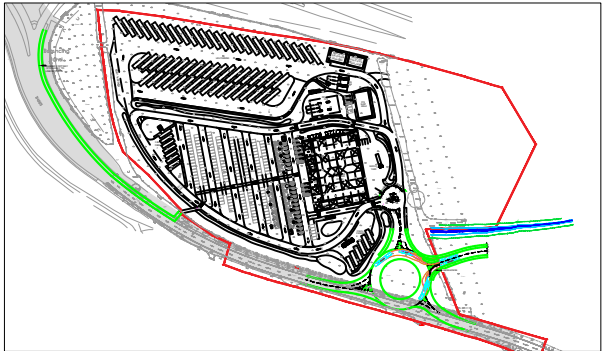


NOTES

THIS IS NOT A CONSTRUCTION DRAWING AND IS FOR INDICATIVE PURPOSES ONLY.
THE DRAWING WILL BE SUBJECT TO CHANGE FOLLOWING LOCAL AUTHORITY REVIEW AND CONFIRMATION OF PUBLIC HIGHWAY AND THIRD PARTY LAND BOUNDARIES.

- INDICATIVE SITE BOUNDARY
- DENOTES NEW KERBS
- EXISTING ADOPTED HIGHWAY

LOCAL AUTHORITY: WILTSHIRE COUNCIL
TOTAL AREA OF SITE: 5.28Ha



SITE LAYOUT NTS

C	LOCAL AUTHORITY UPDATED	HL	MTC	SEP 23
REV	DETAILS	DRAWN	CHECKED	DATE

CLIENT:
MOTO

PROJECT:
MOTO SWINDON

DRAWING TITLE:
PROPOSED FOOTWAY LINK

SCALES:
1:1250 @ A3

DRAWN:	LB	CHECKED:	MC	DATE:	JUN 23
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Croft Transport Planning & Design
340 Deansgate
Manchester
M3 4LY
Email: info@croftts.co.uk
Tel: 0161 837 7380
Web: www.eddisons.com/services/transport-planning

DRAWING NUMBER:	3728-F06	REVISION:	C
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Eddisons | Incorporating
Croft

Balancing Pond

SHARED FOOTWAY / CYCLEWAY TO LINK INTO SITE

B4005

ABNORMAL LOAD

HGV PARKING

CARAVAN PARKING

SITE LAYOUT EXT SWINDON MRA - 11/09/2023

PARKING

120m FORWARD VISIBILITY IN ACCORDANCE WITH A DESIGN SPEED OF 40MPH