



Directorate for Planning Growth & Sustainability

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Development Management
(Aylesbury Area)
Planning, Growth & Sustainability
Buckinghamshire Council

31st March 2023

F.A.O. Sue Pilcher

Dear Sue

Application Number: 22/03783/APP
Proposal: South East Aylesbury Link Road (Phase 2) improvement scheme including dual carriageway (for the Stoke Mandeville Relief Road and to provide connection with the South West Aylesbury Link Road), new roundabout, lighting columns, maintenance bays and access points, diverted public right of way, uncontrolled crossing, provision of two shared cycle/footways, noise bunds and barriers, relocated field accesses, grass verges, road restraint systems, mammal tunnel, flood compensation storage areas, woodland planting, landscaping, habitat creation, drainage ponds and swales, substation and associated infrastructure and earthworks
Location: Field To North Of Hall End Adjacent To Lower Road, Stoke Mandeville, Buckinghamshire.

Thank you for your request for consultation on the South East Aylesbury Link Road (SEALR) Phase 2. An initial Highways response was submitted on the 22nd December 2022 which commented on the Transport Assessment dated 10th November 2022. An additional Technical Note, dated 26th January 2023, has now been received, a Technical Note relating to Highway Design dated 20th February 2023 and updated plans which include General Arrangement, Connectivity and Prow as well as long sections and cross sections. A meeting was conducted with the applicant to discuss any outstanding matters on the 22nd of March 2023. This second response should be read in combination with the December 2022 Highways response.

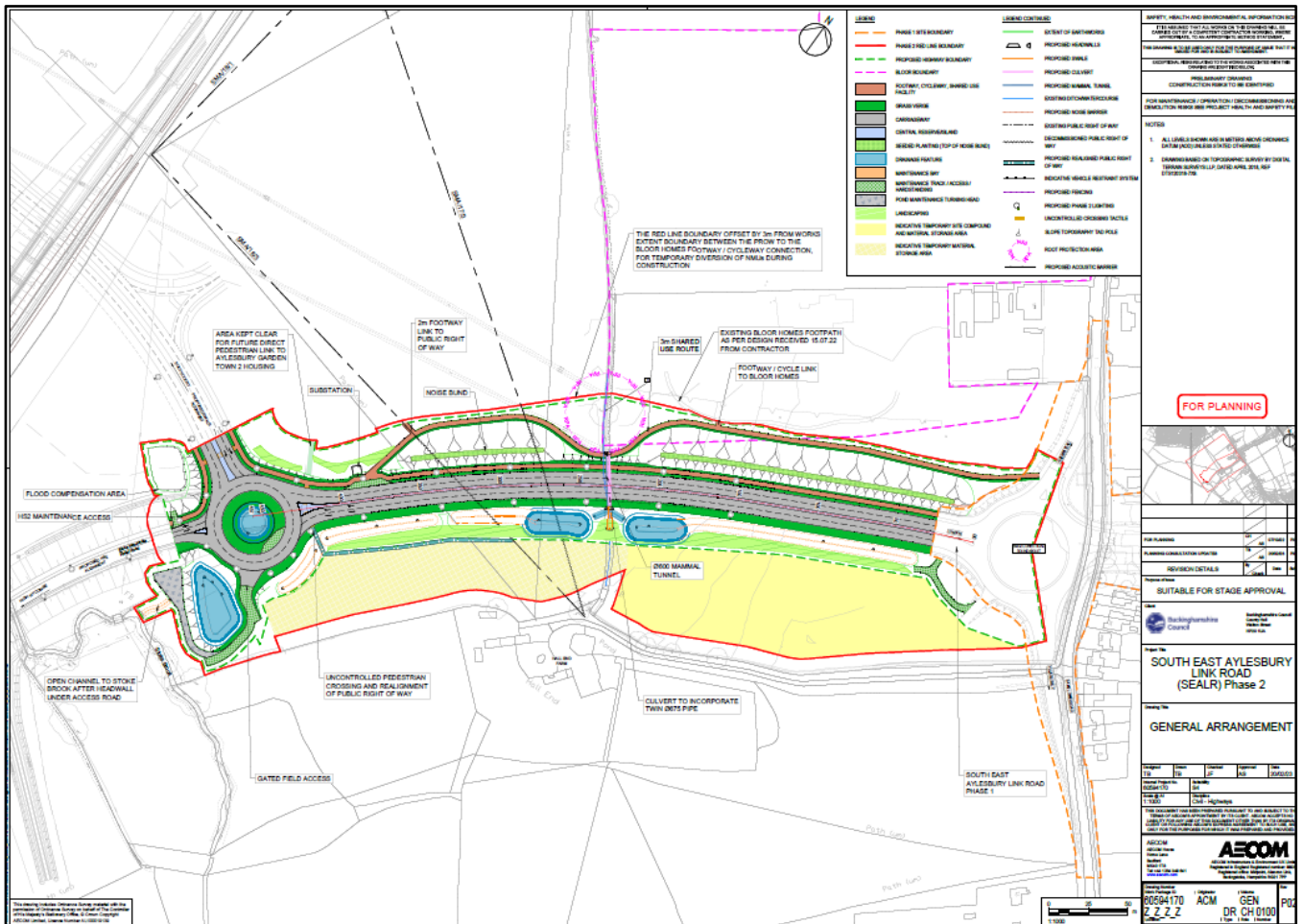
Proposal

Buckinghamshire Council (BC) is seeking to obtain detailed (full) planning permission to upgrade the northern part of the consented Stoke Mandeville Relief Road (SMRR) to dual carriageway status. SEALR Phase 2, as the scheme is known, will provide a 500m section of dual carriageway and a roundabout, linking in to B4443 Lower Road as the western arm of the consented SEALR Phase 1 roundabout.

Design

A four-arm roundabout connecting B4443 Lower Road, SEALR Phase 1, and the proposed scheme will represent the eastern extent of the scheme. The link road will follow an east to south-west alignment for approximately 450m before reaching a new roundabout junction linking in with the South West Aylesbury Link Road (SWALR) and the remainder of the SMRR to the south which will continue to be delivered by HS2 as a single two-way carriageway road.

The February submission includes an updated General Arrangement plan, reproduced below. It shows that the northern footway /cycleway at the bottom of the embankment now bends round a tree protection zone broadly half way along the road.



The proposed amendment to the layout is considered acceptable.

In the December response BC highways had a number of concerns related to the design of the SEALR Phase 2 / SWALR/ SMRR Roundabout.

BC Highways expressed concern that the swept path analysis drawing of the western SMRR / SWALR / SEALR 2 Roundabout showed that an articulated HGV is required to use both running lanes to access and egress the field access. This layout would result in the potential for collisions on the roundabout. BC Highways required the applicant to relax the radius of the field access, in line with the original design, which would allow large vehicles to access and egress the site using one running lane only.

The Technical Note submitted by the applicants has revisited the swept path analysis (vehicle tracking) for a combine harvester and trailer and demonstrates that the combine can manoeuvre through the roundabout using one lane only.

The amended swept path analysis has resolved BC Highways' concerns regarding the roundabout design in this respect.

The second concern related to the location of the HS2 maintenance access west of the SMRR / SWALR / SEALR 2 Roundabout. BC Highways are concerned that right turning vehicles entering and exiting this access need to cross opposing lanes which would increase the risk of collisions and entering vehicles would also need to slow and turn at a point where through traffic will be accelerating, again at the risk of

conflict. BC Highways requested that the radii be relaxed, and the design changed into a left in left out only access to remove right turn movements into the access.

The Technical Note states that the swept path analysis for the HS2 access was revisited to ensure that it was possible to track 4.6t light van in line with the BC Highways requirement and the tracking has shown that it is possible to meet the BC Highways requirements without the need to modify the design and by reinforcing the left in left out only manoeuvre by additional signage.

It is considered that signing only is not sufficient to enforce the left in left out and physical measures to prevent right turns are required in the interests of highway safety. A meeting was conducted on the 22nd of March 2023 with the applicant's consultant. At the meeting it was agreed that a splitter island which physically discourages right in, right out movements would be provided within the HS2 access. The HS2 access might require widening to allow introduction of this island. BC Highways are satisfied that details of this HS2 access can be secured by Condition as any changes would remain within the red edge.

In the December response BC highways expressed concern regarding the location of the substation maintenance hardstanding at the eastern exit of the SMRR / SWALR / SEALR 2 Roundabout. This issue was also raised in the Road Safety Audit (RSA) which states that the location of the hardstanding relatively close to the exit of the roundabout may result in road safety issues with respect to a) vehicles slowing immediately having left the roundabout to access the bay (rear end shunts) and/ or b) vehicles pulling out of the bay at inappropriate times.

The response in the Technical Note does not address the safety issue, but it states that it will be infrequently used.

BC Highways remain concerned about the proximity of the lay-by to the roundabout exit and this issue was therefore also discussed at the meeting on the 22nd March 2023. The applicants have now agreed to move the substation maintenance hardstanding between the SWALR entry and SEALR exit on the eastern side of the roundabout. The slower circulatory speeds make this location more suitable. BC Highways are satisfied that details of the location of the substation maintenance hardstanding can be secured by Condition as any changes will remain within the red edge.

In the previous Highways Response BC also expressed a concern with regards to the location of the maintenance hardstanding located in the centre of the SMRR / SWALR / SEALR 2 Roundabout as it could create potential conflict and it was requested that the maintenance hardstanding was removed from the roundabout and repositioned in a more suitable location.

The Technical Note states that "*The maintenance hardstanding will be used infrequently and then only by the maintenance authority for grass cutting (or pond maintenance if required). It is expected that its use may only be needed once or twice a year. As such the location of the maintenance bay, as proposed, is considered to be suitable.*"

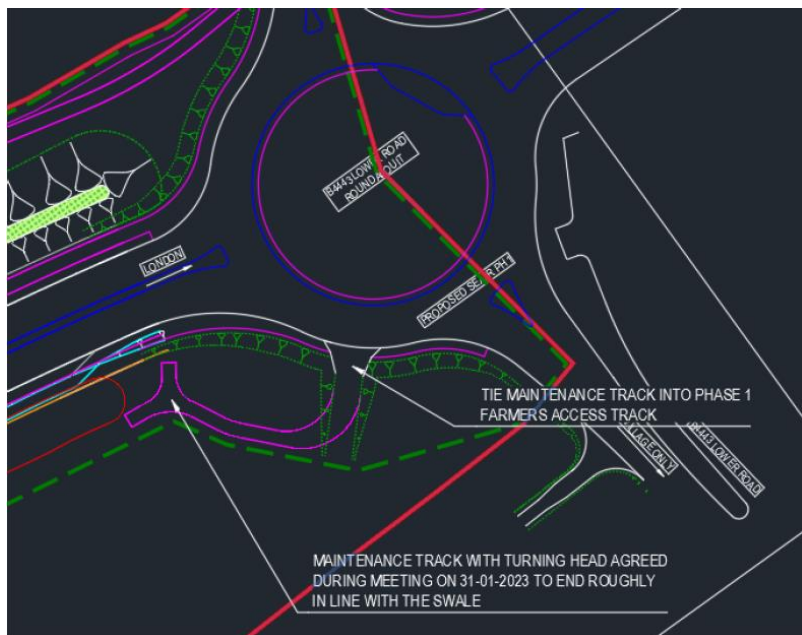
After consideration of the issues further including acknowledging the slower circulatory speeds and the frequency of use, it is considered that the hardstanding in the roundabout is acceptable.

BC Highway's final concern related to the 2m wide maintenance track which was proposed adjacent and parallel to the westbound phase 2 link carriageway, segregated by a narrow verge. The RSA raised a number of issues with this track mainly relating to inadequate clearance between track users and vehicles on the link road.

BC Highways stated that they were concerned about the proximity of the maintenance track located south of the westbound carriageway to the road and requested the track be repositioned further south.

The Technical Note explains that a shortened maintenance track at the eastern end of the scheme has now been proposed as an alternative. Access to this would be taken off the Phase 1 proposed farmer's access in the southwest quadrant of the roundabout and would stop at the beginning of the first swale.

The track contains a turning head so that vehicles do not have to reverse all the way back to the access point at the roundabout.



This solution is considered acceptable.

Traffic Impact Scenarios

The assessment of the proposed scheme has been undertaken utilising the Aylesbury Transport Model (ATM). The ATM is a cordon model of the Countywide model for Buckinghamshire maintained by Transport for Buckinghamshire.

A summary of strategic modelling scenarios and committed development and infrastructure is included in Table 9 of the TA reproduced below:

Table 9 – Summary of Scenarios and Infrastructure and Committed Developments

Scenario Reference	Scenario	Committed Infrastructure	Committed Development
2024 (A)	Do Nothing	Stoke Mandeville Relief Road (A4010 Realignment, single carriageway) Eastern Link Road (North) Stocklake Link Road (Rural) SEALR Phase 1	Berryfields Aylesbury East Kingsbrook
	Do Something	2024 (A) Do Nothing plus: Proposed Scheme (dual carriageway replacement of northernmost section of Stoke Mandeville Relief Road)	-
2024 (B)	Do Nothing	2024 (A) Do Nothing plus: Eastern Link Road (South) Southern Link Road	2024(A) Do Nothing plus: Woodlands (1,100 dwellings, 60 extra car units, 107,800 sqm employment space, 18,553 sqm retail, two primary schools and 3,500 sqm leisure) Hampden Fields (3,700 dwellings and 100,000 sqm employment)
	Do Something	2024 (B) Do Nothing plus: Proposed Scheme	-
2036	Do Nothing	2024 (B) Do Nothing plus: SWALR	2024(B) Do Nothing plus: Aylesbury South West, Remaining balance of VALP housing allocation
	Do Something	2036 Do Nothing plus: Proposed Scheme	-

Junction Modelling

BC Highways previously stated that as Table 10 is difficult to read due to the large amount of information, it would be helpful to receive a table demonstrating the impact of the scheme on the Walton Street Gyratory in all scenarios. This junction in the centre of Aylesbury is expected to be at practical capacity and a clear demonstration of the impact of the scheme on this junction is therefore required.

A table has been provided in Appendix B of the Technical Note and this suggests that the impact on all arms is minimal.

Junction 5: A41 Aston Clinton Road / Park Street / Tesco Access/Walton Road

BC Highways previously stated that it has not been possible to check the geometry as no plan has been provided of this junction. The Technical Note explains that the geometries for this roundabout were obtained from the Junctions 8 report included within the consented Hampden Fields TA (planning reference: 16/00424/AOP), in Appendix L.

Following review, it can be concluded that the AECOM model is consistent with the original Hampden Fields model in the TA.

The results of the modelling demonstrate that the junction is expected to operate with spare capacity which indicates that the impact of the proposed development would be acceptable. Mitigation measures are therefore not required.

Junction 23: Southern Link Road / New Road

BC Highways previously stated that the flows had been checked and are slightly higher than those in the flow charts and were therefore assumed to have been entered correctly as PCU's. The ahead flows on the SLR were not visible on the flow charts to check and amended flow charts for all 2036 scenarios were therefore required.

The Technical Note explains that the set of highway impact diagrams show vehicle flows but the junction was modelled within LinSig for which PCU flows were used. Amended highway impact diagrams are included at Appendix D of the Technical Note and now include all flows.

Flows have been checked and are correct. The modelling indicates that the impact of the proposal on the operation of the junction is likely to be minimal and mitigation measures are therefore not required.

J12: B4443 Lower Road / SMRR North (SEALR Phase 2 / SEALR Phase 1 Roundabout)

This is the eastern junction of the proposed scheme and takes the form of a 4 arm roundabout. The Do Nothing scenarios use the model approved for the SEALR Phase 1 application. The Do Something scenarios adjust this model to account for the SEALR Phase 2 dual carriageway on the western arm of the roundabout.

BC Highways previously stated that the geometry and flows have been checked and are correct and the modelling indicates that, although there is a small increase in RFC from 0.8 to 0.83 and queue length increase from 3.9 vehicles to 4.7 vehicles on the Lower Road South arm in the 2036 PM peak hour, all arms are likely to operate with spare capacity in all DS scenarios.

However, it was not possible to establish the impact of the scheme on this junction using the ARCADY lane simulation assessment as the Do Minimum scenarios had not been assessed. BC Highways therefore requested that the applicant provide DM scenarios of the lane simulation modelling in order for BC to review the effect of the scheme on this junction and consider whether the proposed roundabout operation is acceptable.

The Technical Note includes a revised Table 15 showing the results of the Do Minimum lane simulation model. The table shows the maximum queues and RFCs in the worst 15 minute segment.

Table 15. Junction 12 Lane Simulation Capacity Modelling Results

Scenario	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
	Max RFC	Max Q	Max RFC	Max Q
2024 (A) Do Nothing	0.95	28.3	0.89	5.1
2024 (A) Do Something	0.98	22.8	0.78	3.0
2024 (B) Do Nothing	0.98	65.9	0.91	18.6
2024 (B) Do Something	0.98	100.3	0.90	7.0
2036 Do Nothing	0.97	51.3	0.89	9.2
2036 Do Something	0.96	47.7	0.91	8.1

The table shows that the impact is mainly positive apart from the 2024(B) AM scenario where there is a maximum queue increase of 35 vehicles. The tables do not show the impact by approach, therefore hourly summary results have been copied below.

AM								PM							
Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity		
Proposed Geometries [Lane Simulation] - 2024A DM															
A - SEALR E	0.8	4.80		A	41.33	%	D1	0.9	4.79		A	19.96	%		
B - B4443 S	0.9	6.55		A				0.9	6.19		A				
C - SM W	5.4	18.30		C				10.1	36.20		E				
D - B4443 N	31.5	89.10		F				4.6	16.99		C				
Proposed Geometries [Lane Simulation] - 2024B DM															
A - SEALR E	3.6	9.64		A	70.71	%	D3	5.8	14.12		B	36.24	%		
B - B4443 S	1.0	8.29		A				1.0	8.83		A				
C - SM W	7.1	26.21		D				24.3	77.94		F				
D - B4443 N	69.6	177.19		F				10.9	33.31		D				
Proposed Geometries [Lane Simulation] - 2036 DM															
A - SEALR E	3.3	8.41		A	50.81	%	D5	7.8	17.26		C	23.89	%		
B - B4443 S	3.1	13.08		B				3.6	17.89		C				
C - SM W	4.6	18.27		C				5.9	22.96		C				
D - B4443 N	55.0	139.87		F				12.5	38.11		E				
AM								PM							
Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Network Residual Capacity		
Proposed Geometries [Lane Simulation] - 2024A DS															
A - SEALR E	0.8	4.71		A	35.70	%	D3	1.1	4.92		A	11.51	%		
B - B4443 S	0.9	7.04		A				0.9	6.52		A				
C - SM W	2.8	9.18		A				3.8	10.28		B				
D - B4443 N	26.9	81.97		F				5.2	18.49		C				
Proposed Geometries [Lane Simulation] - 2024B DS															
A - SEALR E	2.5	8.65		A	88.89	%	D7	6.1	15.42		C	20.13	%		
B - B4443 S	1.3	8.36		A				1.2	9.34		A				
C - SM W	2.7	9.56		A				5.2	15.09		C				
D - B4443 N	104.1	235.62		F				10.1	33.12		D				
Proposed Geometries [Lane Simulation] - 2036 DS															
A - SEALR E	4.8	9.09		A	46.06	%	D11	8.1	16.40		C	20.84	%		
B - B4443 S	2.9	13.53		B				4.3	21.02		C				
C - SM W	2.5	8.31		A				2.7	9.64		A				
D - B4443 N	51.6	132.78		F				11.1	36.18		E				

The hourly summary shows that only the B4443 Lower Road North arm in the 2024(B) AM DS scenario worsens but this again improves as further infrastructure comes forward.

It should be noted that the lane simulation results should be treated with caution and used only as a tool to understand the possible implications of lane allocations. The standard Arcady modelling shows a queue length increase from 4.1 to 4.3 vehicles only in the 2024(B) AM DS scenario on the B4443 Lower Road North arm.

It can be concluded that the effect of the scheme on this junction is acceptable.

Summary

The design of the proposed scheme is now considered acceptable.

The proposed scheme is considered to have some overall benefit on the operation of the transport network in the study area, with a neutral or beneficial impact on 80% of junctions assessed, including the A413 Gyratory.

An assessment has been made of the change in traffic flow at each of the junctions for each assessment year. The majority of junctions experience no significant change in vehicular trips, but four junctions were assessed in more detail.

The junction modelling of these four junctions demonstrates that the scheme will result in minimal, or slightly positive impact on the four junctions.

Mindful of the above, I can now confirm that I have no objection to the proposed improvement scheme subject to the following conditions which should be imposed and part of any consent that you may issue.

Condition 1: Prior to the commencement of the development hereby permitted, including works on the construction compound, a Construction Traffic Management Plan (CTMP) shall be submitted to and approved in writing by the Local Planning Authority. The CTMP shall include, but not be limited to, the following:

- a) Phasing of the development;
- b) Layout of construction compound, designed to minimise impacts;
- c) Details of construction access;
- d) Management and timing of deliveries;
- e) Routing of construction traffic;
- f) A method statement for undertaking pre commencement and post completion highway condition surveys and a programme for repairs to make good damage;
- g) Vehicle parking for site operatives and visitors;
- h) Loading/off-loading and turning areas;
- i) Storage of materials;
- j) Precautions/measures to prevent the deposit of mud and debris on the adjacent highway;
- k) How compliance will be monitored, including site inspections and the recording compliance matters.

The CTMP shall then be implemented and adhered to as approved throughout the construction period.

Reason: In the interests of highway safety and to comply with the requirements of the National Planning Policy Framework and emerging policies T1 and T5 of the Vale of Aylesbury Local Plan.

Condition 2: Prior to the commencement of the development hereby permitted details of the adoptable roads and associated works, including but not limited to, structures, earthworks, footways, cycleways, pedestrian crossings and lighting and its junction with the existing highway at Lower Road and the South East Aylesbury Link Road as referred to in the application shall be submitted to and approved in writing by the Local Planning Authority and the adoptable roads and associated works shall not be opened to public use unless the adoptable roads and associated works have been laid out and constructed in accordance with the approved details. The development shall thereafter be retained as approved unless altered for routine maintenance purposes.

Reason: In order to minimise danger, obstruction and inconvenience to users of the highway and of the development and to comply with the requirements of the National Planning Policy Framework and emerging policies T1 and T5 of the Vale of Aylesbury Local Plan.

Condition 3: Prior to development above ground, full details of the scheme for dealing with the disposal of surface water from the roads, footways and cycleways shall be submitted to and approved in writing by the Local Planning Authority. The development shall not be opened to public use unless the surface water drainage scheme has been laid out and constructed in accordance with the approved details. The highways surface water drainage details for the development shall thereafter be retained as approved unless altered for routine maintenance purposes.

Reason: In order to minimise danger, obstruction and inconvenience to users of the highway and of the development and to comply with the National Planning Policy Framework and emerging policies T1 and T5 of the Vale of Aylesbury Local Plan.

Condition 4: No other part of the development shall be opened to public use until the new means of agricultural accesses have been sited and laid out in accordance with the approved drawings and constructed in accordance with Buckinghamshire County Council's guide note "Commercial Vehicular Access Within Highway Limits" 2013.

Reason: In order to minimise danger, obstruction and inconvenience to users of the highway and of the development and to comply with the requirements of the National Planning Policy Framework and emerging policies T1 and T5 of the Vale of Aylesbury Local Plan.

Condition 5: Prior to the commencement of the development hereby permitted details of the HS2 maintenance access, located west of the SMRR / SWALR / SEALR 2 Roundabout, shall be submitted to and approved in writing by the Local Planning Authority. For the avoidance of doubt such details are expected to include physical measures to discourage traffic turning right in to and right out of the access. The access shall not then be brought in to use unless laid out and constructed in accordance with the details to be approved.

Reason: In order to minimise danger, obstruction and inconvenience to users of the highway and of the development and to comply with the requirements of the National Planning Policy Framework and emerging policies T1 and T5 of the Vale of Aylesbury Local Plan.

Condition 6: Prior to the commencement of the development hereby permitted details of the location and construction of substation maintenance hardstanding currently shown east of the SMRR / SWALR / SEALR 2 Roundabout, shall be submitted to and approved in writing by the Local Planning Authority. For the avoidance of doubt the hardstanding is to be relocated on the outside of the circulatory carriageway between the SWALR entry and eastbound SEALR2 exit. The maintenance hardstanding shall not then be brought in to use unless located, laid out and constructed in accordance with the details to be approved.

Reason: In order to minimise danger, obstruction and inconvenience to users of the highway and of the development and to comply with the requirements of the National Planning Policy Framework and emerging policies T1 and T5 of the Vale of Aylesbury Local Plan.

Yours sincerely

Sarah Halsey

**Highways Development Management
Planning Growth & Sustainability**