M42 Junction 6 Development Consent Order

Scheme Number TR010027

8.6 Responses to Examining Authority's First Round of Written Questions

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M42 Junction 6

Development Consent Order 202[ ]

Response to ExA's First Round of Written Questions

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1 Responses to the Examining Authority's Written Questions

1.1.1 This document has been prepared by the Applicant to set out its responses to the Examining Authority's first round of written questions.

1.1.2 These can be found in Table 1.1 below.

Table 1-1 Applicant's Response to the Examining Authority's First Round of Written Questions

No.	Directed to	Question
1.0	**General and Cross-topic Questions**	
1.0.1	Applicant and SMBC	**Question:** **Lighting** **Paragraph 7.8.6 of the ES explains that lighting of new and improved sections of road within the Scheme has been confined to locations where road safety is a priority, in order to reduce the potential for light spill to intrude into the setting of heritage assets. Paragraph 3.5.137 states that consideration has also been given in the lighting design to minimise the potential for lighting to intrude into existing night time views. Can the Applicant therefore confirm whether a lighting strategy has been produced and can be made available to the Examination? Also, could the Applicant and SMBC confirm how it is intended that the final lighting scheme would be controlled? Could the Applicant confirm whether consideration has been given to the effects of traffic headlights on heritage assets (and the living conditions of local residents)?**
		Answer: With regards to lighting of new and improved sections of road within the Scheme, lighting has been confined to locations where road safety is a priority taking into account environmental considerations and airport safety. These are set out in Paragraph 3.5.134 of Chapter 3 of Volume 1 of the Environmental Statement **[APP–048/Volume 6.1].** Where lighting has been deemed essential for road safety, the Applicant shall implement the latest lighting technology in order to minimise light spill. The Applicant has produced a Lighting Strategy to inform the Environmental Assessment. This information is presented as a Technical Note **[Volume 8.27]** which has been submitted to the Examining Authority as part of the

No.	Directed to	Question
		Deadline 2 submission. The technical note details the approach to assessing the safety need and other aspects. Lighting will be provided on both the Strategic and Local road networks. The Strategic road lighting will be controlled (operated by) and maintained the Applicant whereas Local road lighting shall be controlled and maintained by Solihull Metropolitan Borough Council under their statutory functions. The historic environment assessment has taken into consideration the operational lighting requirements for the Scheme, concluding a neutral to slight adverse effect on the historic buildings as per paragraph 7.9.42 of the Environmental Statement **[APP-052/Volume 6.1]**.With regards to the impacts of headlights, these are considered temporary in nature and would not affect a person's ability to appreciate and understand the heritage significance of the assets, thus it is not included within the assessment of heritage assets. The landscape assessment has not specifically examined the potential for vehicle headlights to alter the living conditions of local residents, as it was considered that any localised glare from headlights travelling on new or improved sections of road will only give rise to temporary and transient changes in available night-time views from properties, many of which already feature general light spill in their overall outlook from nearby transportation, aviation and commercial infrastructure.
1.0.2	The LPAs, Natural England (NE) and Campaign to Protect Rural	**Question:** **Lighting** **Paragraph 8.3.6 of the ES explains that *"Following a review of the type and location of road lighting incorporated into the design of the Scheme it was determined that night time visual effects would not be significant on visual receptors due to the distance between receptors and the components of the Scheme that would be lit. Furthermore, it was identified that the M42 motorway corridor and development such as the National Exhibition Centre (NEC) and Birmingham Airport are already lit, and, are the principal source of light spillage in existing night time views within the landscape. Accordingly, night time visual effects associated with road lighting were scoped out of the assessment."* The LPAs, Natural England (NE) and**

No.	Directed to	Question
	England, Warwickshire Branch (CPRE) and the Open Space Society are asked for their views on this.	**Campaign to Protect Rural England, Warwickshire Branch (CPRE) and the Open Space Society are asked for their views on this.**
		Answer: N/A
1.0.3	SMBC	**Question:** **Motorway Service Area (MSA)** Could SMBC provide an update on the progress of the two undetermined planning applications for MSAs at Junctions 4 and 5?
		Answer: N/A

No.	Directed to	Question
1.0.4	Applicant, SMBC and Extra MSA Solihull Ltd and Applegreen plc	**Question:** **MSA** **Paragraph 4.3.5 of the ES explains that north facing slip roads were removed from the proposed new Junction 5a as it was considered that the junction is too close to Junction 6 and providing them would cause safety and operational issues. Paragraph 3.1.9 of the ES states that "*Although the MSA currently does not benefit from planning consent, Highways England has engaged with the applicant for the MSA and has sought to ensure that, where practicable, the design of Junction 5A would not preclude delivery of the MSA, should the MSA be authorised by SMBC following the implementation of the Scheme.*" However, the proposed MSA for Junction 5a includes northern slip roads. Could the Applicant, SMBC and Extra MSA Solihull Ltd and Applegreen plc comment on this potential contradiction.**
		Answer: The Scheme has been developed as a stand-alone proposal. The Scheme originally evaluated north facing slip roads during early option development stage, however, north facing slip roads were removed from the Scheme proposals at Preferred Route Announcement Stage (August 2017). This was because of the operational proximity to Junction 6 and limited traffic demand, as set out in paragraph of 4.3.5 of the Environmental Statement **[APP-049/Volume 6.1]**. The Applicant has engaged with the promotors of the Motorway Service Area (MSA) at Junction 5A and recognises that the MSA proposal includes north facing slip roads. The Applicant, as the strategic highways company, has agreed a number of measures which would be incorporated into the MSA scheme to provide mitigation against the operational impacts of the north facing slip roads. These mitigation measures include: the conversion of the M42 motorway to smart motorway with all lanes running, an upgrade from the dynamic hard shoulder running regime currently in place. The Applicant therefore does not consider there to be any

No.	Directed to	Question
		contradiction.
1.0.5	Applicant	**Question:** **MSA** **Has the positioning of the proposed MSA influenced the proposed siting and design of Junction 5a? If it has, should this be determinative given that the planning application remains undetermined and there is an alternative site at Junction 4 being considered under a separate planning application?**
		Answer: The positioning of the proposed MSA influenced the siting and design of the Junction but did not determine it. The design rationale for Junction 5A is included in Sections 3-6 of Appendix 4 to the Planning Statement **[APP-173/Volume 7.1]**, which sets the range of factors that were considered. One of the objectives was not to preclude the MSA where practicable but there were a number of other factors that were also taken into account.
1.0.6	The Applicant, SMBC, WCC, Extra MSA Solihull Ltd and Applegreen plc, David	**Question:** **DRMB (4.35) indicates that for Rural Motorways (as the M42 nominally is) the desirable minimum weaving length must be 2km. However, the distance likely to be available between any north facing slip roads at junction 5a and the south facing slip roads at junction 6 is roughly 1.7km. In view of the high traffic flows on the M42 (nearly 7,000 vph northbound by 2041 in the AM peak and over 6,000vph southbound, APP-174, Figure 7.2) a longer weaving section might be warranted or desirable. What is the justification for countenancing the potentially sub-standard arrangement envisaged?**
		Answer: The DCO Scheme before the Examining Authority (ExA) does not include north facing slip roads at the proposed

No.	Directed to	Question
	Cuthbert	Junction 5A. As set out in Paragraph 4.3.5 of Environmental Statement Chapter 4 **[APP-049/Volume 6.1]**, there is no identified need nor requirement to provide north facing slip roads and therefore there is no reduction in weaving length between Junctions 5A and 6 within the DCO Scheme Should it be deemed necessary or appropriate to provide north-facing slip roads to Junction 5A at a time in the future, the Applicant considers that this could only be delivered with a material amendment to the DCO or such other consenting means as appropriate.
1.0.7	The Applicant, SMBC, WCC, Extra MSA Solihull Ltd and Applegreen plc	**Question:** **Other than potential trips to and from the MSA proposed at junction 5a, please enumerate other journeys that might depend on the provision of north facing slip roads at junction 5a and outline the circumstances in which such trips might serve a useful purpose.**
		Answer: The Applicant does not consider that there are other journeys that might depend on the provision of north-facing slip roads and therefore north-facing slip roads are not proposed for the new Junction 5A.
1.0.8	The Applicant, SMBC, WCC, Extra MSA Solihull Ltd and Applegre	**Question:** **Sensitivity tests have been undertaken entailing provision at junction 5A for the proposed motorway service area (MSA) [APP-174, 3.9].** **What are the results of those tests?**
		Answer: The results are summarised in the M42/J6 Technical Note 13 Junction 5A Operational Assessment dated June

No.	Directed to	Question
	en plc	2019 which has been submitted for Deadline 2 **[Volume 8.28].**
1.0.9	The Applicant, SMBC, Extra MSA Solihull Ltd and Applegreen plc	**Question:** **Do the tests referred to in ExQ1.0.8 entail ARCADY outputs for the roundabouts at junction 5A? If so, what are the results and what do they demonstrate? If there is no ARCADY output, please justify its absence.**
		Answer: Yes, ARCADY modelling was conducted and the outputs are summarised in M42/J6 Technical Note 13 Junction 5A Operational Assessment, dated June 2019 which has been submitted for Deadline 2 **[Volume 8.24].**
1.0.10	The Applicant, SMBC, Extra MSA Solihull Ltd and Applegreen plc, Mr David Cuthbert	**Question:** **In the absence of an MSA at junction 5a, would a junction designed along the lines indicated by Mr David Cuthbert [AS-018] be more efficient and represent something close to the optimum arrangement?**
		Answer: The proposed published dDCO layout for Junction 5A is a layout which largely follows similar layouts for Junctions across the motorway network, this is also recognised a standard arrangement in the DMRB TD 22/06, figure 5/2. This junction has been assessed to ensure it facilitates traffic movements without incurring significant congestion, this is demonstrated in the Transport Assessment Report **[APP-174/Volume 7.2].** Since the Scheme inception in 2014 the Applicant has worked closely with SMBC, as described in detail in the Environmental Statement Chapter 4 Scheme History and Alternatives **[APP-049/Volume 6.1]**, to develop and

No.	Directed to	Question
		assess design solutions to best meet the Scheme objectives. As a result of this development process the Applicant is satisfied that the Scheme layout published in the dDCO provides the required traffic capacity to cater for future forecast growth and is the most efficient and optimal arrangement for delivering the Scheme objectives with or without the MSA development. The Applicant has reviewed the outline concept design provided by Mr David Cuthbert and has carried out a high level review of similar free-flow Junction design, to DMRB standards, at this location. This is generally comparable to the published dDCO junction layout. The Applicant has carried out a qualitative comparison of this alternative layout with the published dDCO junction in the context of the wider Scheme objectives. This assessment recognises that a free-flow junction arrangement would provide additional traffic capacity to the road network. This additional capacity, however, is not required by the Scheme, nor would it bring the same benefits as the dumb-bell junction arrangement as set out below: 1. The overall footprint and associated land-take is smaller; 2. Has less impact on sensitive environmental features such as Ancient Woodland; 3. Would require less diversion of statutory undertakers apparatus; 4. Safer conditions for maintenance workers. 5. The published dDCO layout provides inherent flexibility to allow improved access to the road network for future local and regional growth. . Based on this high level review the Applicant is satisfied that the published layout in the dDCO provides the optimum junction arrangement and meets the scheme objectives as defined in the Planning Statement **[APP-173/Volume 7.1]**.

No.	Directed to	Question
Environmental Statement [APP-046 to APP-164]		
1.1	**The Project – ES Chapter 3**	
1.1.1	Applicant	**Question:** **The ES indicates that a number of PRoW would need to be closed or diverted. It is stated that these changes have been agreed with SMBC and designed in consultation with the local ramblers groups and associations. The Proposed Development includes the provision of replacement, and enhancement of existing, PRoW. Please could the Applicant confirm which of these closures/diversions would be permanent or temporary and explain how this has been taken into account in the assessment of likely significance?**
		Answer: The Applicant refers the Examining Authority to the Streets Rights of Way and Access Plans, **[APP-009/Volume 3.5**], and the dDCO, **[APP-015/Volume 3.1**], which identifies all permanent closures and new public rights being proposed by the Applicant. Any temporary closures of existing Public Rights of Way are subject to the completion of detailed construction phasing plans and shall be developed by the Applicant during the detailed design phase in co-ordination with the Contractor. Any temporary closures required during construction shall, where reasonably practicable, be diverted in order to maintain their availability for the public. Any temporary closures and associated diversion of Public Rights of Way shall be communicated and agreed with Solihull Metropolitan Borough Council. Regarding permanent closures and diversions of PRoW, an assessment of likely significant effects arising from these on NMUs has been undertaken and presented in Chapter 13 Population and Health of the

		Environmental Statement using the methodology described in paragraph 13.3.43 to 13.3.46 with the assessment of effects reported in paragraphs 13.9.15 to 13.9.28 **[APP-058/Volume 6.1]**. The change in journey lengths experienced by NMUs is reported for each permanent closure/diversion of PRoW. The changes in journey lengths arising from each permanent closure/diversion were assessed to result in minimal disruption for users of PRoW with all effects reported being either minor adverse/beneficial (not significant) or negligible.
1.1.2	Applicant	**Question:** **Para 3.5.170 notes that National Grid (NG) maintains high voltage 400kV assets in close proximity to the proposed A45 eastbound to M42 northbound free flow link. It is explained that these may need to be turned off to protect the workforce during construction of the free flow link underpass structure (to avoid the need for diversion of the assets). Please could the Applicant identify the location of the NG assets, specify the period for which they may need to be turned off, and explain how any potential resulting impacts on the electricity distribution network would be avoided/reduced?**
		Answer: The National Gird assets that have been referred to as part of the Environmental Statement are in close proximity to M42 Junction 6. National Grid towers are positioned in land parcels 5/1a, 5/29c and 5/29t identified in the Land Plans, **[APP-006/Volume 2.2]**, submitted as part of the Development Consent Order Application. The Applicant has continued to liaise with National Grid as part of ongoing design development for the Scheme. As part of this liaison, the Applicant is pursuing a construction methodology to ensure that National Grid's apparatus does not need to be turned off during the duration of the works to construct the A45 Eastbound to M42 Northbound free flow.
1.1.3	Applicant	**Question:** **The limits of deviation (LoD) applied to the Proposed Development are described in the ES and the**

		dDCO only by reference to deviations from the works shown on the Works Plans and the Engineering Drawings and Sections. Neither the LoD nor the parameters to which the LoD is relevant are specified in either the ES or the dDCO. Please can the Applicant specify the dimensions of the relevant parameters and the LoD, preferably in tabular form?
		Answer: The Applicant does not accept that either the LoD or the parameters to which the LoD is relevant are not specified in the Environmental Statement or the dDCO **[APP-015/Volume 3.1**]. The LoD for each numbered Work are described in the Environmental Statement and Article 6 of the dDCO by reference to lateral deviations from the lines or situations for those works shown on the Works Plans [**APP-007/Volume 2.3**] and vertical deviations from the levels shown in the Engineering Drawings and Sections **[APP-013/Volume 2.8**]. The Applicant's position is that such an approach does provide the precision and clarity required. The pink shading utilized on the Works Plans clearly denote the LoDs for all highway works, both linear and non-linear, which can easily be ascertained from the Works Plans. Providing distinct and different coloured lines (e.g. a LoD for each specific work) would render the plans very difficult to read. Similarly, the extent of the vertical limit is clearly set out in Article 6(1)(b) as up to 1.5m for Solihull Road Overbridge (Work No. 3), or up to 50 cm for any other Work, from the levels shown in the Engineering Drawings and Sections. This approach is standard for linear schemes, whether consented by way of DCO, Transport and Works Order, or private or hybrid bill. It provides the required certainty within the dDCO whilst, at the same time, providing the Applicant with the necessary and required flexibility to be able to build and deliver this NSIP. Specifying the exact dimensions of the relevant parameters and the LoD (both laterally and vertically), in tabular form or otherwise, whilst not being necessary for the reasons given above would also unduly constrain the ability of the Applicant to deliver the Scheme.

		The LoD are further constrained as follows: a) in practice, the location of the highway works will naturally be limited by the need to tie in to the existing network of highways; b) in relation to the linear Works, the position is further clarified by the inclusion of the approximate commencement and termination points of those Works on the Works Plan, and by descriptions of their approximate length in Schedule 1 to the dDCO; c) the indicative position of the non-linear works are shown on the Works Plans as well. For example, Work No.32 which is concerned with the installation of drainage attenuation and treatment systems clearly shows the extent of those works. An appropriate element of LoD has been included (with the pink shading around the works to allow for any necessary and required movement of the works). The works cannot be moved anywhere within the Order limits as the works are geographically constrained by reference to the description of the works in Schedule 1; and d) what can actually be built in any particular location is governed by Requirement 3 of Schedule 2 to the dDCO , **[APP-015/Volume 3.1**] which provides that: i. the authorized development must be designed in detail and carried out so that it is compatible with the preliminary scheme design; and ii. any departures from that preliminary scheme design must not give rise to any materially new or materially worse adverse environmental effects in comparison with those reported in the Environmental Statement (**document reference 6.**1). So far as the reference to "materially *new or materially worse adverse environmental effects"* is concerned, the Applicant confirms that the drafting of this Requirement is being revisited. Please see the response to question **2.2** in the accompanying document which contains the Applicant's response to questions raised by the ExA in respect of the dDCO **[Volume 8.7]**.
1.1.4	Applicant	**Question:**

		The areas of permanent and temporary land-take required for the Proposed Development are shown on the Land Plans [APP-006], however they are not quantified in the ES. Please can the Applicant quantify the area of permanent and temporary land take?
		Answer: This information is set out in the Statement of Reasons, **[APP-018/Volume 4.1]**, on page 15, Chapter 3: Description of land subject to compulsory acquisition, Paragraph 3.1.2. states: *"The Land comprises approximately 255.59ha. Of this, approximately 152.72ha will be acquired permanently, 38.91ha will be subject to temporary possession and 60.63ha will be subject to temporary possession with acquisition of permanent rights. The remaining 3.33ha is land over which no powers are sought within the draft DCO, but the land is within Order Limits. It should be noted that 58.43ha of land to be acquired or used permanently is land contained within the existing highway boundary".*
1.1.5	Applicant	**Question:** **ES Figure 3.4 illustrates the construction phasing for the Proposed Development. The legend refers to seven phases although only six phases are depicted. Section 3.6 of ES Chapter 3 refers only to Phases 1 and 2, and although it provides information on the construction activities that would take place it does not identify in which of the six/seven phases these activities would occur. Please can the Applicant clarify the number of construction phases and identify the anticipated activities that would be undertaken in each phase?**
		Answer: Phase 7 refers to the completion of the works, with the roads fully open to traffic and the temporary works removed. The two phases referred to in table 3.3 in Chapter 3 of the ES **[APP-048/Volume 6.1]** represent the proposed approach for the delivery of the scheme with Phase 1 referring to the construction of Junction 5A, the new mainline link road and Clock Interchange works. Phase 2 refers to the improvement works to the new A45 to M42 free-flow link and underpass at Junction 6.

The table below seeks to provide clarity to the proposed construction phasing. The terms phase and sub phase have been used to identify the sequencing of works.

Phase	Sub-Phase	Description of Works
Advanced and enabling works	Not applicable	Surveys Ecological mitigation Trial holes Utility diversions Site clearance
1	1.1	Construction of main project compound Construct modifications to the WGAA facilities Construct PMA along the western side of the new link road Undertake utility diversions Install buried drainage tanks and construct new drainage outfalls Construct temporary alignments for Catherine-De-Barnes Road Construct pedestrian underpass at Airport way Link Construct A45 footbridge
	1.2	Construct junction 5a overbridge and temporary alignment for Solihull Road Excavate for new dual carriageway link Move traffic onto Catherine-De-Barnes Road temporary alignments. Construct Catherine-De-Barnes North and South bridges Construct new accommodation bridge

				Construct new and widen the existing links in the northern side of Clock Interchange Construct M42 to A45 slip road Construct new sign and signal gantries on the M42
			1.3	Divert Solihull Road traffic onto temporary alignment over new junction 5a bridge Demolish redundant Solihull Road bridge. Construct new Solihull Road over bridge and new slip roads Continue construction of new dual carriageway link Divert footpath over new A45 footbridge Widen Clock interchange
			1.4	Move traffic over completed bridges on re-aligned Catherine-de-Barnes Lane Excavate earthwork plugs at location of temporary roads. Continue construction of new dual carriageway link
			1.5	Complete construction of new dual carriageway link Testing and commissioning of technology Open junction 5a and new dual carriageway link
		2	2.1	Construct new A45 north west free-flow link and underpass
			2.2	Complete works at junction 6. De-mobilise all temporary works and compound. Re-instate temporary land
1.1.6	Applicant	**Question:**		

		ES Chapter 3 para 3.6.3 states that the Proposed Development would open for traffic in Autumn 2023 before the works were fully completed, however Table **3.3 indicates that Junction 5A would open to traffic in March 2022. Please can the Applicant clarify which is correct and confirm that it has been consistently reflected throughout the ES?**
		Answer: The Applicant can confirm that both statements within the Environmental Statement are correct. Due to the scale and nature of the Scheme, a phased approach will be adopted to its opening during the period of construction. In order to minimise disruption to road users, it is proposed that M42 Junction 5A and the mainline link road up to Clock Interchange will be open to traffic in March 2022. At this time, works around the M42 Junction 6 would commence and therefore having these parts of the Scheme operational will improve network resilience. The opening date of Autumn 2023 relates to the full opening of the Scheme to traffic. The year 2023 has been adopted in the Environmental Impact Assessment as the 'year of opening', as defined in Chapter 5 within Volume 1 of the Environmental Statement **[APP-050/Volume 6.1].**
1.1.7	Applicant	**Question:** **It is noted in Section 3.6 that an appointed contractor would be responsible for undertaking landscape management within the 'contract period' (after which longer term responsibilities would transfer to the Applicant) and for the preparation of a Handover Environmental Management Plan (HEMP) during that period, which is unspecified. Please can the Applicant identify the duration of the contract period and explain how the production of the HEMP is secured in the dDCO?**
		Answer:

		The production of the HEMP is secured by Requirement 4 of dDCO; particularly sub-paragraphs (6) and (7). It is currently envisaged that the contract period for the contractor appointed to construct the Scheme is typically 2-5 years. Thereafter, the HEMP will be managed by the Applicant's appointed maintenance contractor or other party as considered relevant.
1.1.8	Applicant	**Question:** **Please can the Applicant explain how the potential construction constraints and restrictions that would be in place during the staging of the Commonwealth Games in July/August 2022, includin g at the NEC, have been taken into account in the assessments reported in the ES?**
		Answer: At the time of undertaking the Environmental Impact Assessment, information relating to potential construction constraints and restrictions during the staging of the Commonwealth Games in July/August 2022 was unavailable. Accordingly, any potential constraints and restrictions were not considered in the individual assessments reported within Volume 1 of the Environmental Statement or within the traffic model and forecasts prepared for the Scheme (as the award of the Games had not been granted to Birmingham at the time of developing the traffic model). Notwithstanding this, a review has been undertaken to determine the potential for overlap between construction of the Scheme and these potential constraints and restrictions. This has identified that construction works at M42 Junction 6 (specifically the phased construction of underpasses and retaining walls) would coincide with the July/August 2022 period. In accordance with Requirement 10 of the dDCO, the contractor will be required to prepare a Traffic Management Plan in advance of construction. This document will detail the potential overlaps between national events such as the Commonwealth Games, and local events such as those held at the Birmingham National Exhibition Centre. In preparing this document, the contractor will work closely with

		the organising authorities to minimise road user disruption as much as practicable.
1.2	**Scheme History and Alternatives – ES Chapter 4**	
1.2.1	Applicant	**Question:** **Plans** **To make it easier to decipher, the Applicant is requested to provide plans which show the ES Figures 4.1 and 4.4 options plotted individually.**
		Answer: The Applicant has provided these updated plans at Deadline 2. Please see **Volume 8.26.**
1.3	**EIA Methodology and Consultation – ES Chapter 5**	
1.3.1	Applicant	**Question:** **Chapter 5 of the ES indicates that the Register of Actions and Commitments (REAC) records all the proposed embedded mitigation measures. However, the preamble within the Outline Environmental Management Plan (OEMP) states that the REAC identifies 'certain key items' of embedded mitigation. Please can the Applicant confirm whether all of the proposed embedded mitigation measures are included in the REAC? If not, please can the Applicant provide a table that identifies all the mitigation relied upon in the ES and the mechanism by which that mitigation is secured, as recommended in Planning Inspectorate Advice Note Seven?**
		Answer: The Applicant can confirm that not all embedded mitigation measures are in the Register of Actions and Commitments (REAC). The Applicant has prepared a table that identifies the information the mitigation relied upon in the ES and the

		mechanism by which that mitigation is secured. Please see **[Volume 8.29]**.
1.4	**Air Quality – ES Chapter 6**	
1.4.1	Applicant	**Question:** **Baseline** **Please can the Applicant confirm whether the '20m' specified in Appendix 6.1, paragraph 1.1.10 [APP-120] relating to sensitive human health receptors is a textual error and should read '200m'?**
		Answer: This is a typographical error. Paragraph 1.1.10 in Appendix 6.1 **[APP-120/Volume 6.3]** should read as: During the operational phase, there is the potential for the Scheme to affect receptors further than 200m from the Scheme. 64 receptor locations have been selected across the study area in order to assess the potential impacts of the Scheme on the wider study area. Receptors have been selected in order to represent potential worst case locations near to the Scheme, while those further than 200m from the Scheme are selected in order to represent an area. These locations are detailed in **Table 1** and are shown on Figure 6.2 **[APP-080/Volume 6.2]**.
1.4.2	Applicant	**Question:** **Baseline** **Please can the Applicant also describe the type/extent of the areas that the selected receptors beyond 200m were chosen to represent.**
		Answer: The modelled receptors are listed in Appendix 6.1 **[APP-120/Volume 6.2**] and shown in Figure 6.2 **[APP-**

080/Volume 6.2]. The receptors and the area they were chosen to represent are shown in the table below:

Receptors	**Area Represented**
R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R18, R50, R55, R57, R58, R59	Marston Green and urban area to the northwest of the Scheme
R12, R13	Rural area to the northeast of the Scheme
R14, R15, R16, R17, R20, R21	Area surrounding the existing M42 Junction 6 and Clock Interchange
R19	A45/Coventry Road corridor
R22, R23, R24	Rural area to the east of the Scheme
R25, R26, R64	Hampton in Arden
R27, R28, R29, R30	Rural area to the south east of the Scheme
R31, R32, R48, R54, R63	Area adjacent to the M42 to the south of the Scheme, and near to M42 Junction 5
R33, R34, R37	Urban area to the southwest of the Scheme
R35, R36, R56, R61, R62	Urban area to the west of the Scheme
R38, R39	Catherine-de-Barnes and approach to Scheme Southern Junction

		R40, R41, R42, R43, R44, R45, R46, R51, R52, R60	Bickenhill and area adjacent to Scheme corridor
		R47, R53	Residential properties adjacent to M42 corridor, and Southern Junction
		R49	Rural area to the west of the Scheme
1.4.3	Applicant	**Question:** **Cumulative impacts** **Please can the Applicant identify how and where the mitigation referred to in the ES relevant to the assessment of air quality is secured, particularly with regard to the construction stage of the Proposed Development and the cumulative impacts from dust and other emissions at the proposed Motorway Service Area.**	
		Answer: The Environmental Statement (ES) confirms that when the Scheme is operational no significant adverse effects on air quality are likely and, accordingly, no mitigation is proposed within the ES in this regard. Notwithstanding this, the ES identifies the potential for air quality effects to occur during the construction phase. Section L.6 of Appendix L Outline Pollution Prevention Plan of the Outline Environmental Management Plan (OEMP) **[APP-172/Volume 6.11]** sets out the measures which the Contractor must follow. Requirement 4 (1), (2) and (4) of the dDCO **[APP-015/Volume 3.1]** makes it mandatory for the Contractor responsible for constructing the Scheme to produce a Construction Environmental Management Plan (CEMP), substantially in accordance with the OEMP. The CEMP is also required to include a Dust, Noise and Nuisance Management Plan (Requirement 4(3)(d)(i)).	

		The same Requirement, sub paragraph (5) confirms that *'the construction of the authorised development must be carried out in accordance with the approved CEMP'*.
1.4.4	Applicant	**Question:** **Mitigation and monitoring** **The REAC [APP-114] states that the CEMP must include an Air Quality Management Plan (AQMP) and cross-references to dDCO Requirement 4 (R4) (which is replicated in the OEMP [APP-172]). However, no further details of an AQMP are provided and the list of management plans in dDCO R4 that must be included in the CEMP does not include an AQMP. Please can the Applicant set out the measures that would be contained in the AQMP and what activities it will manage and explain where the requirement to provide an AQMP is secured in the dDCO or any other legally binding application document?**
		Answer: The term Air Quality Management Plan is a typographical error, and should be read as Dust, Noise and Nuisance Management Plan, as included in the OEMP **[APP-172/Volume 6.11]** and secured through Requirement 4, Schedule 2 of the dDCO **[APP-015/Volume 3.1]**.
1.4.5	Applicant	**Question:** **Consultation** **It is not indicated in ES Chapter 6 [APP-051] if the approach and findings of the assessment have been agreed with relevant consultees and other key stakeholders. Please can the Applicant set out the extent to which there was such agreement?**
		Answer: The approach to the air quality assessment reflects that set out within the M42 Junction 6 Improvement

		Scoping Report, with amendments made following receipt of the Scoping Opinion (in which the views of relevant consultees were recorded and taken account of). Meetings were held with Natural England in April 2018 and September 2018 to discuss the Environmental Impact Assessment. These discussions verified to Natural England that the air quality assessment will take account of sensitive ecological receptors and sites, and presented the emerging findings of the assessment into the Scheme's potential effects on Aspbury's Copse ancient woodland. This position is set out in the Statement of Common Ground with Natural England as resolved. The latest draft has been submitted at Deadline 2 **[Document 8.10/ Volume 8]**. Following submission of the DCO application in January 2019, dialogue has been entered with air quality specialists within Solihull Metropolitan Borough Council (SMBC) to clarify the findings of the air quality assessment and respond to post-submission queries raised in update meetings with the Applicant and to inform SMBC's Local Impact Report.
1.5	**Cultural Heritage – ES Chapter 7**	
1.5.1	Applicant	**Question:** **Archaeology** **Proposed Work No.27 comprises the construction of a new free flow link road (approximately 750 metres in length) with single carriageway and hard shoulder on both embankment and in cutting, connecting the M42 Southbound to the A45 Eastbound. This would cut through one of the five recorded medieval settlements, namely that at Middle Bickenhill (10504) comprising a manor house and settlement founded as a secondary colony settlement to that at Bickenhill. However, this heritage asset is not included within those identified as having the potential to be affected by the scheme. The Applicant is asked why this is so?**
		Answer: Proposed Work No. 27 is limited to within the extent on the current highways boundary. As a result, there will

		be no potential impact on the significance of Middle Bickenhill (10504).
1.5.2	Applicant	**Question:** **Archaeology** **Proposed Work No.16 comprises the construction of realigned new two-lane single carriageway Catherine-de-Barnes Lane, including the construction of the new Catherine-de-Barnes North Overbridge and tie in works to the existing St Peters Lane access to the village of Bickenhill. Work No. 73 comprises the construction of a temporary two-lane single carriageway to the north of the proposed Catherine-de-Barnes North Overbridge. Work no. 7 comprises a new 2.4km dual carriageway mainline link on both embankment and in cutting.** **Each of these appear to encroach into the western extent of the identified medieval parish of Bickenhill (10499). However, this heritage asset is not included within those identified as having the potential to be affected by the scheme. The Applicant is asked why this is so?**
		Answer: The medieval parish of Bickenhill (10499) is included within the baseline of the assessment. The information recorded on the Historic Environmental Records (HER) regarding the settlement is limited and only a central location point is provided. This point has been included on Figure 7.2 Sheet 2 of 2 **[APP-084/Volume 6.2]** The special extent of the medieval settlement is not known and therefore it was not possible to determine as part of the impact assessment if the proposed Scheme would physically affect Bickenhill (10499). The heritage asset defined in the ES as Bickenhill Medieval Manor (6198) is considered likely to cover the same extent as the medieval parish of Bickenhill (10499). The extent of this asset, as detailed on Figure 7.2 Sheet 2 of 2 Volume 2 of the ES, extends into the area of works packages nos. 7, 16 and 73. It is noted that an assessment of the potential effect on Bickenhill Medieval Manor (6198) has not been undertaken as part of the environmental impact assessment. For clarity the assessment of the potential significance of effect on asset 6198 is provided below.

		The heritage asset identified as Bickenhill Medieval Manor (6198) located on the outskirts of Bickenhill on the HER is located in the medieval parish. The impact upon it is considered to be slight. The manor is an extension to the settlement of Bickenhill and has been recorded from earthworks identified on the ground and from aerial photographs. The asset holds archaeological significance from the information it may provide in relation to the development of the medieval settlement and associated farming practices. The limit of the asset, as defined by the HER entry, is inconsistent with the historic mapping and does not match with the road layout or field boundaries recorded from historic mapping. The full extent of the asset and its boundaries is not understood. The heritage asset is considered to have low value in accordance with the methodology detailed in Section 7.3 of Chapter 7 – Cultural Heritage, of the ES **[APP-052/Volume 6.1]**. Proposed works packages No. 7, 16 and 73 would physically affect only the north-western corner of this asset. The Scheme's Order Limits extends into a small section of the asset and therefore the impact would result in very minor changes to the asset. Its significance will be maintained. As a result, the potential impact on the significance of Bickenhill Medieval Manor (6198) is considered to be minor. On an asset of low value this results in a significance of effect of slight adverse in line with **Table 7-3** of the Chapter 7 of the ES **[APP-052/Volume 6.1]**. The ongoing programme of evaluation and the standard mitigation measures detailed within Section 7.8 of Chapter 7: Cultural Heritage of the ES **[APP-052/Volume 6.1]** will ensure that appropriate mitigation measures are put in place should any remains associated with this asset be identified.
1.5.3	Applicant	**Question:** **Archaeology** **Proposed Work No. 4 comprises the construction of a new M42 off-slip road both in cutting and on embankment that diverges from the M42 and connects to the new Junction 5A of the M42. Proposed Work No. 5 comprises the construction of a new M42 on-slip road both in cutting and on embankment that merges onto the M42 from the new Junction 5A of the M42. Both works cut through monument 4539 as shown on Sheet 2 of ES Figure 7.2. It appears to correspond at least in part with Aspbury's Copse ancient woodland but the significance of this heritage asset is not**

		described within Chapter 7 of the ES. Could the Applicant address this and explain why this heritage asset is not included within those identified as having the potential to be affected by the scheme?
		Answer: The Applicant assumes that the ExA is referring to asset 4549. The Applicant has assessed the impact on heritage asset 4549 (Aspbury's Copse semi natural ancient woodland) on Sheet 2 of ES Figure 7.2 **[APP-084/Volume 6.2].** The presence of the Aspbury's Copse ancient woodland is included in the baseline of Chapter 7: Cultural Heritage, of the ES **[APP-052/Volume 6.1]** due to the contribution it makes to the historic landscape. The potential effect on the historic landscape is considered in paragraphs 7.9.27 – 7.9.31. The ancient woodland has also been considered as an ecological asset. Assessment on the impacts and subsequent effects on Aspbury's Copse ancient woodland is presented within Chapter 9: Biodiversity of the ES **[APP-054/Volume 6.1].**
1.5.4	Applicant	**Question:** **Archaeology** **Appendix 7.1 of the ES provides a written scheme of investigation for archaeological evaluation trenching. Paragraph 7.4.16 of the ES states that the findings of the evaluation trenching shall supplement the information presented within Chapter 7 and shall be submitted during the Examination.** **Could the Applicant provide a timescale for this along with associated reporting of findings? Could the Applicant confirm whether the intention is to produce an addendum to Chapter 7 of the ES to re-evaluate the significance of effect on archaeological deposits?**
		Answer: The programme of archaeological evaluation trenching commenced on 20th March 2019. Due to unforeseen

		issues with land access arrangements, 41 out of the proposed 101 trenches were undertaken during this first phase of work. The interim report into the results of Phase 1 can be found in the MOLA – Interim Archeological Trenching Report **[Volume 8.22]**. At the time of writing access has now been agreed to the majority of the outstanding areas for investigation with the archaeological evaluation trenching within these areas due to commence on 24th June 2019. It is anticipated that the Phase 2 evaluation works will take approximately three weeks to complete. The final report for the works will be provided within four weeks of completion of the fieldwork as per the timescales set out in the written scheme of investigation. Following receipt of the final report, were the findings of this report to change the findings and conclusions in Chapter 7: Cultural Heritage of the Environmental Statement **[APP-052/Volume 6.1]** this will be brought to the attention of the Examining Authority. Following production of the written scheme of investigation it was decided that the two archaeological evaluation trenches proposed within the grounds of the Warwickshire Gaelic Athletic Association would not be undertaken due to the potential disturbance of the sports pitches, thus reducing the total of 101 to 99.
1.5.5	County Archaeologist for Warwickshire's	**Question:** **Archaeology** **What is the County Archaeologist for Warwickshire's view on the findings on the construction impacts and effects on known archaeological assets set out in Chapter 7 of the ES and any of the above archaeology related questions?**
		Answer: N/A
1.5.6	Applicant, LPAs and EH	**Question:** **Assessment Methodology** **Table 7.1 of the ES apportions a high asset value to Grade I and Grade II* listed buildings as well as to conservation areas containing very important buildings. Conservation areas with important**

		buildings are categorised as having a medium asset value. On this basis, the Applicant, LPAs and EH are asked whether there is a contradiction between the medium heritage value afforded to both Hampton in Arden Conservation Area and Bickenhill Conservation Area, insofar as the former contains one Grade I listed building and two Grade II* listed buildings, whilst the latter contains one Grade I listed building? If so, how would this affect the significance of effects for both of these heritage assets?
		Answer: In accordance with DMRB methodology (Volume 11, section 3, part 2), conservation areas have been assigned two levels of value. This is intended to recognise those conservation areas which are designated due to their association with a high number of highly graded listed buildings which have a group value. While both Hampton in Arden and Bickenhill Conservation Areas do contain Grade I and Grade II* listed buildings, these are not considered to define the special interest of the designated areas; therefore, they do not raise the value of the conservation area. The effects on the listed buildings are assessed separately. The assessment takes into consideration their contribution to the relevant conservation areas, but recognises that the assets have special historic and architectural interest in their own right. The resultant effect takes into account the impact on this interest.
1.5.7	Applicant, LPAs and EH	**Question:** **Bickenhill Conservation Area** **Is there a discrepancy between the moderate adverse construction effects on Bickenhill Conservation Area set out in Table 7.7 with the large adverse construction effects predicted for Viewpoint J set out in Table 8.5 and large adverse effects on Landscape Character Area 2 (LCA2) set out in paragraph** **8.9.10 of the ES?**

		Answer: The Applicant does not consider there to be a discrepancy as the assessments take account of different factors. While both assessments are considering the potential effects on Bickenhill Conservation Area there is significant differences in the aspects of the historic townscape and the physical townscape being considered. The cultural heritage assessment of the conservation area examines the effects on the special historic and architectural interest of the area. It concentrates on impacts to the understanding and appreciation of the historic development of the settlement and how this is revealed within the building fabric and setting. The assessment of Viewpoint J takes into consideration a single view on the edge of the conservation area, rather than the asset as a whole. The Scheme would be prominent within this view resulting in a major adverse effect on the viewpoint from a landscape assessment perspective. The heritage assessment also takes into consideration the value of the conservation area as a whole, including those areas where the Scheme will not be appreciable. While there remains a moderate adverse effect on the conservation area from the landscape assessment, the effect on the special interest of the designation as a whole is considered to be less than that of the single view. In contrast, Landscape Character Area 2 (LCA2) covers a substantial area with Bickenhill forming a small part. The character of the area and the potential changes as a result of the proposed Scheme are substantially different to those identified at Bickenhill Conservation Area; therefore, it is not appropriate to compare the two effects.
1.5.8	Applicant, LPAs and EH	**Question:** **Bickenhill Conservation Area** **Similarly, could the Applicant explain any perceived inconsistencies between the prediction of a**

		neutral significance operational effect on Bickenhill Conservation Area as set out in Table 7.8 with the large adverse effects on visual amenity predicted for Viewpoint J in Table 8.6, both in year one and year 15 as well as the large adverse effect predicted for LCA2 in year 1, reducing to moderate adverse in year 15?
		Answer: The Applicant does not consider there to be an inconsistency as the assessments take account of different factors, as per the principles of assessment as set out in the Applicant's response to Question 1.5.7.
1.5.9	Applicant, LPAs and EH	**Question:** **Bickenhill Conservation Area** **Given that the Scheme would result in the loss of several historic field boundaries of medieval origins, and the partial loss of medieval and post- medieval landscape as well as ancient woodland, could the Applicant provide further justification to the conclusion within the ES of a slight adverse effect on the historic landscape during the construction phase?**
		Answer: The historic landscape is considered to have historic significance and low heritage value as it is a robust fieldscape which, whilst having its origins in the medieval period, has been subjected to further field sub-division in the 19th century. The wider landscape is already dominated by linear features, including the M42; A45; Catherine-De-Barnes Lane; the London and Birmingham Railway Line and; Birmingham Airport. When assessed against the extant historic landscape it is considered that the Scheme would result in the partial loss of limited, individual elements of this wider landscape such as field boundaries and woodland. Due to the nature and extent of the wider landscape, and the design of the Scheme being in scale with other elements of the landscape, it is concluded the change will be absorbed.

		Following the methodology detailed in Section 7.3 of Chapter 7 – Cultural Heritage of the ES **[APP-052/Volume 6.1]** when considering the extent of physical alteration that would occur as a consequence of Scheme construction, the assessment has concluded that this would result in a slight adverse (not significant) effect on the historic landscape.
1.5.10	Applicant, LPAs and EH	**Question:** **Paragraphs 7.8.2 – 7.8.4 of the ES states that the Scheme has been designed, as far as possible, to avoid and minimise impacts and effects on cultural heritage through the process of design development, and by embedding measures into the design of the Scheme. A number of standard measures have been identified, which would be implemented by the contractor to reduce the impacts and effects that construction of the Scheme would have on cultural heritage receptors. No compensation or enhancement measures have been identified as being required. The Applicant, LPAs and EH are requested to comment further on this position, having regard to paragraph 5.137 of the NNNPS, which states that applicants should look for opportunities for new development within the setting of heritage assets to enhance or better reveal their significance.**
		Answer: At this stage, no assets have been identified that would benefit from compensation or enhancement measures in line with NPSNN paragraph 5.137. Should any features be identified during the construction programme, proposals will be put forward in accordance with the Archaeological Control Plan (Requirement 4) and the Written Scheme of Investigation (Requirement 9).
1.6	**Landscape – ES Chapter 8**	
1.6.1	Applicant	**Question:** **Viewpoint C – The location and orientation of the viewpoint as shown at Figure**

		8.1 does not appear to correspond with the photographs provided at Figure 8.2 both in terms of the position and orientation. Can the Applicant confirm which is correct?
		Answer: The photographs provided are correct. The position of the viewpoint arrow marker on Figure 8.2 Plan B within Volume 2 of the Environmental Statement **[APP-087/Volume 6.2]** is incorrect. The photography was taken from a position slightly to the west of the location identified by the viewpoint marker.
1.6.2	Applicant	**Question:** **Viewpoint D –The summer and winter photographs presented at Figure 8.2 Plan B Sheet 10 appear to be the same?**
		Answer: This is a presentational error. Figure 8.2 Plan B Sheet 10 within Volume 2 of the Environmental Statement **[APP-087/Volume 6.2]** should contain two different photographs illustrating the views taken during both the winter and summer. A corrected version of this figure accompanies this response **[APP-087/Figure 8.2a].**
1.6.3	Applicant	**Question:** **Viewpoint F – Can the Applicant clarify whether the stated effect in summer year 15 should be slight adverse as set out in ES Appendix 8.1, or neutral as set out in Table 8.6?**
		Answer: The effect for Viewpoint F in the summer year 15 assessment stated in Appendix 8.1 within Volume 3 of the Environmental Statement **[APP-127/Volume 6.3]** is correct i.e. slight adverse.

1.6.4	Applicant	**Question:** **Viewpoint I - Could the Applicant explain the nature of the perceived influence from the M42 and NEC as a detractor to this view, particularly as the viewpoint faces away from the M42 and the major aspects of the NEC. Moreover, the summertime view provided appears to largely screen Clock Interchange and the A45 and Birmingham Airport beyond. Against these observations and the criteria set out in Table 8.1 relating to residential receptors and users of PRoWs, can the Applicant give further justification for the moderate sensitivity of the viewpoint?**
		Answer: Viewpoint I is located on a local public right of way and is directed towards the NEC and the A45 (a major transport route within the assessment study area). The agricultural field contained within the outlook from Viewpoint I comprises commonplace agricultural elements and features, which combine to create generally unremarkable character but have some sense of place. During winter months, Birmingham Airport and the NEC are more evident as features within the view. Due to the variable nature of views available from public rights of way across the landscape, a sensitivity rating of moderate was assigned to Viewpoint I. This reflects guidance contained in Figure 6.1 of the Guidelines for Landscape and Visual Impact Assessment (third edition) (The Landscape Institute, 2013), which states that "*the susceptibility of the visual receptor to specific change and the value of the particular view are combined to judge the sensitivity*". The assignment of a moderate sensitivity rating to Viewpoint I was accordingly determined using profession judgement. This judgement took account of the composition of the view throughout the year, its relative value given the agriculturally dominated outlook and presence of built form and transportation infrastructure, and the presence of highway embankment vegetation.
1.6.5	Applicant	**Question:** **Viewpoint J - Given the degree of change against the baseline position, as well as the sensitivity of**

		the receptor, please can the Applicant give further explanation as to the basis of the conclusion of a large adverse effect, as opposed to a very large adverse effect, particularly in the winter year one scenario?
		Answer: Viewpoint J is deemed as being highly sensitive to change given its residential location, and the assessment identified that the Scheme would result in a major magnitude of change on this receptor. A major magnitude of change is contextualised in Table 2 of Interim Advice Note 135/10 where "*The project, or a part of it, would become the dominant feature or focal point of the view"*. Table 4 of Interim Advice Note 135/10 provides a typical descriptor of a large adverse effect. This states that "*the project would cause major deterioration to a view from a highly sensitive receptor, and would constitute a major discordant element in the view*". Table 4 provides a typical descriptor of a very large adverse effect. This states that *"the project would cause the loss of views from a highly sensitive receptor, and would constitute a dominant discordant feature in the view".* Given the presence of existing road infrastructure in the view from Viewpoint J, the Scheme would introduce additional highway components into the view which will be evident in the winter months of year one, which will lead to a major deterioration in the outlook. However, it would not cause the loss of the view or constitute a dominant discordant feature. It is not, therefore, a very large adverse effect. On this basis, the assessment has recorded a large adverse effect on Viewpoint J winter year one.
1.6.6	Applicant	**Question:** **Can the Applicant explain why viewpoint J, which represents one of the most sensitive viewpoints, has not been developed into a detailed visualisation?**

		Answer: The assessment recorded that the change in visual outlook from Viewpoint J would result in a large adverse (significant) effect. Accordingly, it was determined that the development and inclusion of a rendered visualisation from Viewpoint J would not add value to the assessment or aid the interpretation and understanding of how the Scheme would change the balance of components in the view.
1.6.7	Applicant	**Question:** **Viewpoint K – Can the Applicant confirm whether the effects in winter year one are predicted to be moderate adverse, as set out in Appendix 8.1, or large adverse, as set out in Table 8.6?**
		Answer: The effect for Viewpoint K in the winter year 1 assessment stated in Appendix 8.1 within Volume 3 of the Environmental Statement **[APP-127/Volume 6.3]** is correct i.e. moderate adverse.
1.6.8	Applicant	**Question:** **Viewpoint L – Can the Applicant clarify whether the impact in winter year one is assessed to be major, as set out in Appendix 8.1, or moderate, as set out in Table 8.6?**
		Answer: The effect for Viewpoint L in the winter year 1 assessment stated in Appendix 8.1 within Volume 3 of the Environmental Statement **[APP-127/Volume 6.3]** is correct i.e. major adverse.
1.6.9	Applicant	**Question:** **Viewpoint S – Can the Applicant confirm whether the receptor sensitivity set out in Appendix 8.1 should be moderate rather than high, on the basis that the value and susceptibility is assessed to be**

		moderate? **Given the introduction into this view of two lit, elevated roundabouts, overbridge and initial section of the mainline link road along with the partial loss of woodland, please could the Applicant provide further justification for the assessment of a slight adverse effect in summer year 15. Or is it the Applicant's view that new hedge planting is sufficient to reduce the effect from moderate adverse in winter year 1?**
		Answer: The receptor sensitivity rating for Viewpoint S stated in Appendix 8.1 within Volume 3 of the Environmental Statement **[APP-127/Volume 6.3]** is considered by the Applicant to be moderate, based on its value and susceptibility to change. Refer to Sheet 3 of Figure 8.8 within Volume 2 of the Environmental Statement **[APP-095/Volume 6.2]** which presents the landscaping proposals for the Scheme relevant to Viewpoint S. The landscaping measures at the proposed M42 Junction 5A will introduce and establish woodland edge planting to the north of the two roundabouts, as well as new hedgerow planting. This landscaping, coupled with the height of existing vegetation along field boundaries in this location, will integrate the Scheme into the receiving landscape. Over time, this landscaping will reduce the significance of the effect at Viewpoint S from moderate adverse in winter year 1 to slight adverse in year 15. By year 15, the Scheme would cause limited deterioration to the existing view.
1.6.10	Applicant	**Question:** **Viewpoint T – The stated influence of the M42 is not readily evident in the viewpoint photograph whilst the overhead electricity infrastructure is low in the summertime view and largely invisible in the wintertime view. Against this can the Applicant provide further justification that the detractors to the view result in a moderate susceptibility? Given that the value of the view for users of the PRoW**

		is assessed to be high, could the Applicant give further justification for its position of moderate sensitivity?
		Answer: Although Viewpoint T has been assigned a high value with regard to public rights of way users, it was concluded that this rating is at the lower end of high value due to it being positioned on a part of the route located in an area that is influenced by surrounding infrastructure, and it being a local footpath. This surrounding landscape is influenced by major transport and overhead transmission infrastructure. Collectively, these detractors erode the existing view and therefore a moderate susceptibility to change was assigned in the assessment.
1.6.11	Applicant	**Question:** **Given also the introduction into this view of two lit, elevated roundabouts, an overbridge and initial section of the mainline link road, along with the partial loss of woodland, is the introduction of hedge planting sufficient to reduce the magnitude of impact from major at winter year one to moderate in summer year 15? Please can the Applicant explain the discrepancy between a moderate adverse effect identified in Appendix 8.1 and a large adverse effect in Table 8.6 (winter year one)? Can the Applicant also confirm why, even if the sensitivity of the receptor is justifiably moderate and the magnitude of impact is also moderate, how the resulting effect set out in Appendix 8.1 is likely to be slight adverse? This also differs from the moderate effect set out in Table 8.6. Can the Applicant explain these discrepancies? Viewpoint V – Can the Applicant explain why this position was chosen over one further west which would potentially show both the new Junction 5a and raised approaches and new Solihull Road overbridge? Does the chosen position represent a worst-case assessment?**
		Answer: The following part of the response relates to Viewpoint T: Refer to Sheet 3 of Figure 8.8 within Volume 2 of the Environmental Statement **[APP-095/Volume 6.2]**

		which presents the landscaping proposals for the Scheme relevant to Viewpoint T. The landscaping measures at the proposed M42 Junction 5A will introduce and establish woodland edge planting to the north of the two roundabouts, as well as new hedgerow planting. This landscaping, coupled with the height of existing vegetation along field boundaries in this location, will integrate the Scheme into the receiving landscape. Over time, this landscaping will reduce the significance of the effect at Viewpoint T from major adverse in winter year 1 to moderate adverse in year 15. Regarding the identified discrepancies, these are minor typographical errors. The information for Viewpoint T contained in Table 8.6 in Chapter 8 within Volume 1 of the Environmental Statement **[APP-053/Volume 6.1]** is correct i.e. this receptor will experience a major magnitude of change and a large adverse effect in winter year one, and a moderate magnitude of change and a moderate adverse effect in year 15. The following part of the response relates to Viewpoint V: The position for Viewpoint V was selected as a suitable location to represent views available to vehicle travellers along Solihull Road approaching the Scheme. The location was not chosen as a viewpoint to illustrate a specific point or place of interest; rather it provides an indication of how the Scheme would appear in the wider view available along Solihull Road. Any chosen position for a viewpoint has not been selected because it would represent a worst-case assessment. The position of any chosen viewpoints is deemed to be a representative view only.
1.6.12	Applicant	**Question:** **Viewpoint AA – Can the Applicant provide further justification why, in the absence of notable detractors, the susceptibility of the viewpoint from the PRoW has been assessed as moderate, having regard to the criteria set out in Table 8.1? Can the Applicant also explain the reference to increased lighting associated with the Scheme remaining a visible element in the context of existing views of the lit M42 corridor, when the viewpoint itself faces away from the same?**

		Answer: Although Viewpoint AA is located on a public right of way, the existing view comprises an agricultural field with typical agricultural elements, hedgerow vegetation and features. Due to the variable nature of views available from public rights of way across the landscape, a susceptibility rating of moderate was assigned to Viewpoint AA. This reflects guidance contained in Figure 6.1 of the Guidelines for Landscape and Visual Impact Assessment (third edition) (The Landscape Institute, 2013), which states that *"the susceptibility of the visual receptor to specific change and the value of the particular view are combined to judge the sensitivity"*. The assignment of moderate susceptibility to Viewpoint AA was determined using profession judgement, which took account of the composition of agriculturally focused outlook and the presence of vegetation. Although Viewpoint AA is directed away from the M42 motorway corridor, the lit elements of the M42 motorway and those further afield at Birmingham Airport will have an indirect impact on the darkness of the night sky and its tranquillity.
1.6.13	Applicant	**Question:** **Viewpoint BB - Can the Applicant explain why are the photographs in Figure 8.2 for viewpoint BB are taken behind a hedge when the receptors are vehicular users of Solihull Road? Moreover, does the visualisation of Viewpoint BB in Figure 8.7 represent a worst case assessment in this area? Wouldn't it be more useful to have positioned the viewpoint further east where the new embankments and overbridge might be visible in the context of the ancient woodland, as well as the dumbbell arrangement of J5a, particularly in the winter months? What would be the difference in the night time views? Are Year 1 visualisations to be prepared for this viewpoint?**
		Answer: Viewpoint BB was requested through consultation with Solihull Metropolitan Borough Council, and was

		positioned due to the location of a public right of way linking onto Solihull Road. The lighting of the proposed M42 Junction 5A will be an addition within the view, rising above the intervening vegetation, but will be seen in the context of the existing lit M42 motorway corridor. No year 1 visualisation was prepared for Viewpoint BB, as it was determined that a rendered photograph would not provide further information for the assessment of visual impact from this location.
1.6.14	Canal and River Trust	**Question:** **Viewpoint DD – Are the Canal and River Trust satisfied that Viewpoint DD has been scoped out for further consideration in the assessment on the basis of the reasons set out in paragraph 8.3.32 of the ES?**
		Answer: N/A
1.6.15	Applicant	**Question:** **Viewpoint EE/FF – Can the Applicant explain the sensitivity of these residential receptors against the criteria of Table 8.1?**
		Answer: Due to the direct nature of the views afforded to residential receptors on Catherine-de-Barnes Lane and St Peters Lane, a sensitivity rating of moderate was assigned to reflect that this is a view where detracting elements such as the highway, signage and telegraph poles currently form a noticeable part of the outlook. This reflects guidance contained in Figure 6.1 of the Guidelines for Landscape and Visual Impact Assessment (third edition) (The Landscape Institute, 2013), which states that "*the susceptibility of the visual receptor to specific change and the value of the particular view are combined to judge the sensitivity*".
1.6.1	Applicant	**Question:**

6		**It is noted that the predicted landscape and visual effects are based on the successful delivery of embedded mitigation in the form of a 'planting strategy' that reflects the mitigation measures set out in the REAC [APP- 114] and is based on the planting depicted in ES Figure 8.3 [APP-090]. However, neither the REAC nor Figure 8.3 provide further details of what this would comprise, such as, for example, the species that would be planted. In the absence of this information the efficacy of the mitigation is uncertain. Please can the Applicant set out what the planting strategy would comprise, and explain how it is secured in the DCO or other legally binding application document?** **In addition, the 2038 assessment reports the predicted effects during the summer, when vegetation would be in full bloom. Please can the Applicant explain how this addresses the worst-case?**
		Answer: All references to the 'planting strategy' in Chapter 8 within Volume 1 of the Environmental Statement **[APP-053/Volume 6.1]** refer to the landscaping measures incorporated into the design of the Scheme, as illustrated on the illustrative Environmental Masterplan at Figure 8.8 within Volume 2 of the Environmental Statement **[APP-095/Volume 6.2].** The Applicant is required to prepare and implement a landscaping scheme based on these measures under Requirement 5 (the Applicant acknowledges that the reference to the Environmental Masterplan in (Requirement 5.2) is incorrect). This will be corrected in the next draft of the DCO. At this stage, the planting design illustrated on Figure 8.3 within Volume 2 of the Environmental Statement **[APP-090/Volume 6.2]** is indicative. No planting layouts, schedules or specifications have been prepared as these will be matters for development during the detailed design stage. Paragraphs 8.9.15 and 8.9.16 of Chapter 8 within Volume 1 of the Environmental Statement **[APP-053/Volume 6.1]** summarise the planting and grassland types that are proposed to be delivered as part of the Scheme. A detailed 'landscaping scheme' will be prepared and approved prior to construction of the Scheme and will be secured in accordance with Requirement 5 of the dDCO **[APP-015/Volume 3.1]**. The landscaping scheme will reflect the planting measures illustrated on Figure 8.3 within Volume 2 of the Environmental

		Statement **[APP-090/Volume 6.2]** and will include information on cultivation, plant species, planting densities, retained planting and protection measures. In relation to the assessment of worst-case, refer to paragraph 8.3.50 in Chapter 8 within Volume 1 of the Environmental Statement **[APP-053/Volume 6.1].** The worst-case assessment is year 2023 (winter) which reflects the first year in which the Scheme will be open to traffic and prior to the establishment of landscaping. The year 2038 (summer) assessment is not intended to represent a worst-case; rather this is to demonstrate the effectiveness of planting once it reaches a level of maturity and is performing its intended visual screening and integration functions.
1.6.17	Applicant	**Question:** **Paragraph 8.8.8 of the ES states that signage provision has been designed to minimise the potential for visual clutter along new and improved roads. Can the Applicant confirm on what basis this assertion has been reached? Has a signage strategy been produced and is it proposed that this be controlled by way of requirement or similar?**
		Answer: The Applicant is working in collaboration with SMBC and its own Operational Directorate to develop a robust signage strategy catering to the demands of the strategic and local road networks alongside any flexible requirements to cater for key businesses within the region, while minimizing visual clutter. The Applicant has identified locations for signs on gantries, which are shown as numbered Works and assessed as part of the Scheme. The development of the Signage Strategy is focused on identifying key destinations which will be placed on the sign faces. The provision of Regulatory, Warning and Information signs will be determined through the construction phase, it is acknowledged that these signs are smaller signs to be designed in compliance with the Traffic Signs Regulations and General Directions (TSRGD). Signage will not be secured through Requirements in the draft DCO but through compliance with the TSRGD and the Applicant's duties under the Road Traffic Regulation Act 1984.

1.7	**Biodiversity – Chapter 9 and HRA**	
1.7.1	Applicant	**Question:** **The extent of the respective study areas used for the assessment of local statutory nature conservation designations and non-statutory designations is unclear, as conflicting information about 1km/2km study areas is provided within ES Chapter 9 [APP-054] and in associated appendices/figures. Please can the Applicant clarify the extent of the study areas used for the assessment of effects on local statutory and non-statutory designated sites and explain how these informed the assessment?**
		Answer: Regarding local statutory nature conservation designations (i.e. Local Nature Reserves), the area of consideration adopted in the biodiversity assessment is 1km, as detailed in Table 9.2 within Chapter 9 of Volume 1 of the Environmental Statement Statement **[APP-054/Volume 6.1]** and in Table 4 of Appendix 9.1 within Volume 3 of the Environmental Statement Statement **[APP-129/Volume 6.3].** The assessment identified that there are no local statutory nature conservation designations within the 1km study area, and accordingly these sites were not considered in the biodiversity assessment. For clarity, Figure 9.1B within Annex C of Appendix 9.1 of Volume 3 of the Environmental Statement **[APP-129/Volume 6.3]** has been updated to remove all Local Nature Reserves (both within and beyond the 1km study area). Regarding non-statutory designations, both Table 9.2 within Chapter 9 of Volume 1 of the Environmental Statement **[APP-054/Volume 6.1]**, and Table 4 of Appendix 9.1 within Volume 3 of the Environmental Statement **[APP-129/Volume 6.3]** contain minor typographical errors. Both tables should only refer to a 1km study area being adopted for non-statutory designations, rather than a 2km study area quoted. The extents of the 1km study area and the non-statutory designations located both within and beyond this distance are illustrated on Figure 9.1B within Annex C of Appendix 9.1 of Volume 3 of the Environmental

		Statement **[APP-129/Volume 6.3].** The 1km study area has been applied within the biodiversity assessment to identify both direct and indirect effects on non-statutory designations, this being the distance within which the scoping of potential impacts identified a likelihood of significant effects occurring.
1.7.2	Applicant	**Question:** **Baseline** **In addition, ES Appendix 9.1 Figure 9.1A [APP-129] depicts seven Local Nature Reserves (LNRs) beyond the 1km study area but within, on or adjacent to the 2km study area boundary. However, no reference is made to these sites in the assessment reported in the ES. Please can the Applicant confirm whether potential effects on these sites were considered, and if so where the assessment can be found?**
		Answer: Please refer to the response to ExQ 1.7.1. The seven local statutory nature conservation designations (Local Nature Reserves) are located beyond the extents of the 1km study area, as illustrated on Figure 9.1A within Annex C of Appendix 9.1 of Volume 3 of the Environmental Statement **[APP-129/Volume 6.3].** As these seven designations are located beyond the 1km study area, these were not considered in the biodiversity assessment.
1.7.3	Applicant	**Question:** **Baseline** **Both ES Figures 9.1A (statutory designations) and 9.1B (non-statutory designations) [APP-129] include LNRs (although they are statutorily designated sites). The location of Elmdon Coppice LNR**

		differs between the two figures. It is shown on Figure 9.1A as located beyond the 1km study area but within the 2km study area, however Figure 9.1B depicts it as extending into the 1km study area. Please can the Applicant confirm its location and on what basis it was considered in the assessment, and provide corrected figures as necessary.
		Answer: Elmdon Coppice Local Nature Reserve is located beyond the 1km study area; however, the extents of this statutory nature conservation designation fall within the boundary of Hampton & Elmdon Coppice Local Wildlife Site, which is illustrated on Figure 9.1B within Annex C of Appendix 9.1 of Volume 3 of the Environmental Statement **[APP-129/Volume 6.3].** Hampton & Elmdon Coppice Local Wildlife Site is an area of wet woodland and marsh, the eastern extents of which are located within the 1km study area. On review, it was noted that the assessment of the effects of the Scheme upon this non-statutory designation was not reported within the biodiversity assessment in Chapter 9 within Volume 1 of the Environmental Statement **[APP-054/Volume 6.1].** The assessment identified that there will be no direct impacts to Hampton & Elmdon Coppice Local Wildlife Site. The assessment of indirect impacts to all Local Wildlife Sites presented within paragraphs 9.9.53 to 9.9.58 of the biodiversity chapter in Chapter 9 within Volume 1 of the Environmental Statement **[APP-054/Volume 6.1]** is considered to be sufficient to evaluate such effects on Hampton & Elmdon Coppice Local Wildlife Site. Accordingly, no further consideration of the effects of the Scheme on to Hampton & Elmdon Coppice Local Wildlife Site is required. For clarity, Figure 9.1B within Annex C of Appendix 9.1 of Volume 3 of the Environmental Statement **[APP-129/Volume 6.3]** has been updated to remove all Local Nature Reserves (both within and beyond the 1km study area).
1.7.4	Applicant	**Question:**

		Methodology **It is stated in ES Chapter 5 that the significance of an effect was determined by combining the importance of an ecological feature with the predicted magnitude of impact, using professional judgement guided by the CIEEM guidelines. However, no further details are provided of how the approach specified in the CIEEM guidelines was applied to this assessment. Please can the Applicant explain how individual importance and magnitude values were combined to determine each level of significance.**
		Answer: Chapter 5 of Volume 1 of the Environmental Statement **[APP-050/Volume 6.1]** presents the approach and generic criteria applied in the Environmental Impact Assessment of the Scheme. The Applicant therefore assumes that the reference to this chapter in the question is incorrect, and that the question is referring to the content of Chapter 9 of Volume 1 of the Environmental Statement which reports the biodiversity assessment and references the CIEEM guidelines. Details of the CIEEM guidelines and how these have supplemented other best practice guidance used in the biodiversity assessment are presented in Section 9.3 of Chapter 9 of Volume 1 of the Environmental Statement **[APP-054/Volume 6.1].** The importance (value) of ecological features is expressed with reference to relevant geographical scale(s), using the ratings and criteria presented in Table 9.1 which were developed using a combination of the guidance contained in Interim Advice Note 130/10 and that contained in the CIEEM guidelines. Paragraphs 9.3.36 and 9.3.37 detail how impacts on ecological features were characterised. Consistent with the CIEEM guidelines, impacts were considered on a case-by-case basis for each identified ecological feature, taking account of the aspects and complexities presented within paragraph 9.3.36 and 9.3.37. Following this, the predicted impacts on ecological features were rated using the magnitude of impact ratings presented in Table 5.2. Paragraph 9.3.43 confirms that the identification of likely significant effects on identified ecological features

		involved combining the importance (value) and magnitude of impact ratings. This process was guided by the CIEEM guidelines, and using a combination of professional judgement and any relevant scientific information, the effects were evaluated at a geographical scale and reported in accordance with the ratings set out in in paragraph 9.3.46. The application of the above is explained in the following hypothetical worked example: 1. The assessment identifies that construction of the Scheme will require permanent landtake, which will result in the loss of a species (ecological feature) that is important at the international geographical scale. 2. The assessment records that this loss constitutes an impact of Major (adverse) magnitude, as it has established that there is a high certainty that the impact will occur and that it is irreversible, due to it being a direct consequence of the Scheme. 3. The assessment combines the importance of the affected ecological feature (international scale) with the predicted magnitude of impact (Major (adverse)), and concludes that this will result in a Very large (adverse) effect, which would be significant.
1.7.5	Applicant	**Question:** **Assessment of effects** **The potential effects on a number of ecological receptors during the construction phase are unclear as the reported effects are those anticipated in the design year (operational Year 15), once mitigation measures have become established, eg in respect of Castle Hill Farm Meadows LWS, habitats losses and gains, habitat fragmentation, breeding and wintering birds, great crested newts and terrestrial invertebrates. Please can the Applicant provide an assessment of the predicted effects during construction on each of the identified ecological receptors?**
		Answer: For clarity, the following sections present further assessment of the predicted impacts and effects of the

		Scheme during construction on the ecological receptors identified in ExQ 1.7.5. **Castle Hill Farm Meadows LWS** Paragraphs 9.9.44 to 9.9.46 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** report the identified impacts and effects on Castle Hill Farm Meadows Local Wildlife Site associated with construction of the Scheme. The construction assessment recorded that the loss of habitat within this designation will constitute a magnitude of impact of minor adverse (as only 1.6% of the total area would be lost), resulting in a slight adverse effect. **Habitat Losses & Gains** <u>Plantation Woodland</u> Paragraph 9.9.61 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** reports that construction of the Scheme will result in a loss of 2.33 hectares of plantation woodland. This loss constitutes a magnitude of impact of minor adverse, resulting in a slight adverse effect. <u>Scrub</u> Paragraph 9.9.62 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** reports that construction of the Scheme will result in a loss of 6.01 hectares of scrub. This loss constitutes a magnitude of impact of minor adverse, resulting in a slight adverse effect. <u>Grassland</u> Paragraph 9.9.63 in Chapter 9 the Environmental Statement **[APP-054/Volume 6.1]** reports that construction of the Scheme will result in a loss of 7.08 hectares of species-poor, semi-improved grassland. This loss constitutes a magnitude of impact of minor adverse, resulting in a slight adverse effect. <u>Ponds</u>

		Paragraph 9.9.64 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** reports that construction of the Scheme will result in a loss of three ponds (Ponds 8, 39 and 43), the locations of which are illustrated on Figure 9.9 in Appendix 9.9 within the Environmental Statement **[APP-137/Volume 6.3]**. The loss of these ponds constitutes a magnitude of impact of minor adverse, resulting in a slight adverse effect. <u>Hedgerows</u> Paragraph 9.9.65 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** reports that construction of the Scheme will result in a loss of approximately 4.5 kilometres of hedgerows. Losses of hedgerows of County importance (with a length greater than 20 metres) constitutes a magnitude of impact of moderate adverse, resulting in a moderate adverse effect. Losses of hedgerows of Local importance (with a length greater than 20 metres) constitutes a magnitude of impact of moderate adverse, resulting in a slight adverse effect. Losses of any hedgerows of a length less than 20 metres constitutes a magnitude of impact of negligible, resulting in a neutral effect. **Habitat Fragmentation** Paragraph 9.9.67 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** reports that construction of the Scheme will result in habitat fragmentation, which will mainly occur through the loss of hedgerows that provide interconnectivity between habitats. The fragmentation of the hedgerow network will result in a magnitude of impact of minor adverse, resulting in a slight adverse effect. <u>Breeding & Wintering Birds</u> Paragraph 9.9.95 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** reports that construction of the Scheme will lead to a loss of farmland, hedgerow and scrub habitat, which for breeding and wintering birds constitutes a magnitude of impact of minor adverse, resulting in a slight adverse effect.

		Great Crested Newts Paragraphs 9.9.112 to 9.9.113 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** report that construction of the Scheme will result in both a temporary and permanent loss of habitat for a small number of ponds confirmed to have great crested newt present. This loss constitutes a magnitude of impact of minor adverse, resulting in a slight adverse effect. Terrestrial Invertebrates Paragraph 9.9.117 to 9.9.118 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** report that construction of the Scheme will result in a loss of terrestrial invertebrate habitat. This loss constitutes a magnitude of impact of minor adverse, resulting in a slight adverse effect.
1.7.6	Applicant	**Question:** **In respect of construction effects on aquatic invertebrates it is stated in ES Chapter 5 [APP-050] that Hollybrook pLWS and Kingshurst Brook pLWS are of 'County' importance and could experience habitat loss and degradation, however only Hollybrook pLWS is subsequently assessed. Please can the Applicant explain the apparent omission and provide an assessment, as necessary, of potential habitat loss and degradation effects during construction on Kingshurst Brook pLWS?**
		Answer: The Applicant assumes that the ExA is referring to Hollywell Brook potential Local Wildlife Site (pLWS). The levels of importance attributed to Hollywell Brook pLWS and Kingshurst Brook pLWS are presented in Table 9.6 of Chapter 9: Biodiversity within the Environmental Statement **[APP-054/Volume 6.1]**. The absence of reporting the potential construction impacts and effects of the Scheme upon the aquatic invertebrates associated with Kingshurst Brook pLWS is an omission. The outcomes of this assessment are presented below, and reference the standard best practice construction mitigation measures set out in Section 9.8 of Chapter 9 within the Environmental Statement

		[APP-054/Volume 6.1] and in the Outline Environmental Management Plan **[APP-172/Volume 6.11].** **Habitat Loss** During construction of the Scheme, the implementation of standard best practice mitigation measures will result in no direct impacts relating to habitat loss on Kingshurst Brook pLWS and its associated aquatic invertebrates. Accordingly, no significant effects relating to habitat loss are predicted as a result of construction of the Scheme. **Habitat Degradation** As there will be no in-channel works within Kingshurst Brook pLWS during construction of the Scheme, no direct impacts relating to habitat degradation are predicted on Kingshurst Brook pLWS and its associated aquatic invertebrates. The assessment has recorded a risk of indirect impacts to the brook and its associated aquatic invertebrates; however, these will be limited to accidental pollution events. This indirect impact will be mitigated through the implementation of standard practice methods during construction of the Scheme, which will result in a negligible magnitude of impact on aquatic invertebrates and an effect of neutral significance. Accordingly, no significant effects relating to habitat degradation are predicted as a result of construction of the Scheme.
1.7.7	Applicant	**Question:** **The assessment of operational effects is mostly focussed on the potential effects of the Proposed Development in the design year and very little reference is made to the opening year, so the predicted effects at that stage are unclear. Please can the Applicant explain this approach and set out the potential effects during the opening year, as appropriate?**

		Answer: Paragraph 9.3.40 of Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** explains that both the construction impacts and those associated with the long term presence of the Scheme are reported together as part of the construction phase assessment, and that operational effects are those associated with the use of the Scheme, for example those associated with traffic travelling on new or improved sections of road, and from road lighting. The assessment has been reported in this way to avoid repetition within the chapter, and to reflect the fact that new habitats (for example those proposed as mitigation) will not have established. Accordingly, Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** reports the impacts and effects that are likely to exist in the opening year of the Scheme once open to traffic as part of the construction assessments. The operational assessments report the effects of the Scheme in the design year (year 15) to account for the full effectiveness of mitigation.
1.7.8	Applicant	**Question:** **There appears to be a contradiction in relation to potential operational effects on barn owls and other birds in Section 9 of the ES Biodiversity chapter [APP- 054]. Para 9.9.166 states that the design of the Proposed Development incorporates drainage areas along the verges rather than vegetation, which would reduce the risk of bird (other than barn owl) mortality. However, para** **9.9.168 states that the risk of barn owl collisions would be managed through the establishment of tall vegetation on the verges. Please can the Applicant explain this apparent contradiction?**
		Answer: Paragraph 9.9.166 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** explains how habitats on the verges will be designed to minimise the risk of mortality from birds, such as thrushes, which

		are known fly at a low level when crossing between open areas (and are therefore at risk of mortality as a result of traffic collisions). This frequently occurs when these birds pass between areas of shelter, for example scrub, hedgerows and trees that flank and lie close to the edge of highways. The presence of steep embankments and the creation of open areas (via the proposed drainage ditches) at the margin of the new dual carriageway is considered an appropriate means of mitigating the risk of this impact, as along the majority of the length of the new dual carriageway the more suitable areas of shelter will be away from the edge of the road and/or higher up the embankment. Accordingly, these smaller bird species will still be able to cross the new dual carriageway but will be encouraged to do so at height, thereby avoiding the area of highest impact. Paragraph 9.9.168 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** explains how features on the verges of the road, for example fencing and established vegetation, will be used to avoid the risk of mortality to barn owl. In this case the features will be used to deflect the flight path of barn owls above the new dual carriageway, and to be most effective, these features will be located at the top of the verge either at the highest point achievable (where the new dual carriageway is positioned in cutting) or distant from the edge of the new dual carriageway. In contrast, placing these features in a position on the verge close to the edge of the new dual carriageway would be unlikely to deflect barn owl above vehicles. These elements of mitigation, both for barn owl and smaller bird species, are considered to be compatible rather than contradictory, as they rely upon the establishment of vegetation (scrub or hedgerows) on the verge that is located away from the edge of the new dual carriageway.
1.7.9	Applicant	**Question:** **It is noted that baseline data was collected for the following in the summer and autumn of 2018: bat emergence/re-entry (negative, ie absence results only); bat activity; and aquatic invertebrates; and that surveys for lichen and fungi were to be carried out in early 2019, through updated surveys of Aspbury's Copse pLWS. It is stated in the ES that the findings of these 2018 and 2019 surveys are to be provided prior to or during the Examination. Please can the Applicant indicate when these survey**

		results will be submitted, and explain if they have any implications for the assessments in the ES, notwithstanding that it is considered in the ES that their absence did not limit the assessment?
		Answer: As noted a number of ecological surveys are being undertaken in 2019 to support the application. The following information updates the current position for each of the surveys: • The 2018 Bat Survey Report (which collates the remaining bat survey data that due to time constraints for submission meant it could not be included within the final biodiversity assessment) is proposed to be submitted by Deadline 3. • The 2018 Aquatic Invertebrates Report (which collates the remaining survey data that due to time constraints for submission meant it could not be included within the final biodiversity assessment) is proposed to be submitted by Deadline 3. • The 2019 Bat Survey Report is proposed to be submitted on or before Deadline 5. • The Lichen and Fungi Surveys within Aspbury's Copse will be undertaken in June 2019 and September 2019 due to seasonal constraints and optimum survey windows. These are proposed to be submitted on or before Deadline 4 and 6 respectively. Notwithstanding the above, the biodiversity assessment has been undertaken based upon a worst case scenario for species and supporting habitats, as such, the assessment is not considered to be limited by the absence of these reports, and where required the applicant has used relevant third party data to inform parts of the assessment where surveys were yet to be undertaken (at the time of submission). Natural England has agreed to both the method of assessment and including the approach for additional surveys to support the DCO submission. Both in terms of additional surveys for 2019 for the purpose of the assessment, and the surveys associated with the application of the applicable European Protected Species (EPS) Licences. The draft licences and draft letter of no impediment from Natural England within the DCO application

		(Volume 2 Appendix 9.18 - 9.19 **[APP-145-146/Volume 6.3]**) indicate that the statutory environmental body is sufficiently content with the Applicant's approach, in terms of assessment methodology, survey requirements and mitigation requirements.
1.7.10	Applicant	**Question:** **It is noted that dipwell monitoring was undertaken within the Bickenhill Meadows SSSI in August and September 2018 (and will be ongoing) and that the Applicant intends to submit the monitoring results during the Examination. Please can the Applicant indicate when the results will be submitted, and explain if they have any implications for the assessments in the ES, notwithstanding that it is considered in the ES that that the information gained to-date is valid and sufficient to identify potential impacts on the SSSI?**
		Answer: The Bickenhill Meadows SSSI Preliminary Hydrological Investigation Technical Note (V.7) contained in Appendix 14.2 within Volume 3 of the Environmental Statement **[APP-109/Volume 6.3]** has been updated following submission of the Development Consent Order application. The latest version of this Technical Note (V.9) incorporates up to date measurements recorded as part of the ongoing dipwell monitoring, and further interpretation in relation to the potential effects of the Scheme on Bickenhill Meadows Site of Special Scientific Interest Following continued modelling and analysis of the Scheme's effects on Bickenhill Meadows Site of Special Scientific Interest, V.9 of the Technical Note now presents a passive mitigation solution which does not rely on the pumping of water. This passive solution can be delivered within the Order Limits and will also achieve the required levels of water replenishment to Bickenhill Meadows Site of Special Scientific Interest. The content of V.9 of the Technical Note was discussed with Natural England and Warwickshire Wildlife Trust in a meeting on the 14/03/19, at which a general consensus of support was given to a passive solution. V.9 of the Technical Note will be shared with Natural England, Warwickshire Wildlife Trust and Solihull

		Metropolitan Borough Council in June 2019 for their consideration. Following this, a copy will be submitted to the examining authority during examination of the Development Consent Order application. The biodiversity assessment presented in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** adopted a worst-case scenario, and the data collected and presented within the DCO application is considered to be sufficiently robust and comprehensive enough to inform the assessment of likely significant effects of the Scheme on Bickenhill Meadows Site of Special Scientific Interest.
1.7.11	Applicant	**Question:** **Mitigation and monitoring** **In their consultation response contained in ES Appendix 9.17 [APP-144], Natural England (NE) indicate that whilst they considered that a pumping solution would be effective to mitigate impacts on Bickenhill Meadows SSSI (SE unit), it would be a heavily engineered solution, and they preferred a more passive solution, based on adaption of the natural hydrological processes. The ExA notes that the Applicant states that they intend to agree any refinements to the solution with NE prior to commencement of the Proposed Development. Please can the Applicant provide an update on discussions on this matter with NE, and identify any proposed changes to the strategy and how they may affect the assessment of the effectiveness of the mitigation?**
		Answer: The Applicant met with Natural England on the 13th March 2019 to discuss a proposed passive mitigation solution. Discussions were based upon further field data collection and additional modelling undertaken of the southeast (SE) SSSI unit. The proposed changes to the strategy will be presented within Bickenhill Meadows SSSI Hydrological Investigation Report (to be submitted to the ExA no later than Deadline 3). In summary, this will promote a proposed change in strategy to comprise a passive, gravity fed, non-pumped mitigation solution, that would replenish the water lost to the SE SSSI wet meadow catchment as a result of the Scheme.

1.7.12	Applicant	**Question:** **It is not explained where the embedded mitigation measures described in ES Section 9.8 [APP-054] in respect of habitat avoidance (retention of existing habitat), creation and replacement; habitat translocation; drainage; and protected species are secured in the dDCO [APP-015] or other documents.** **Please can the Applicant identify where they are secured within the application documents?**
		Answer: Measures embedded into the design of the Scheme are secured through Requirement 3. Mitigation measures within the REAC will be secured through Requirement 4 of the dDCO application.
1.7.13	Applicant	**Question:** **The ExA notes that the proposed standard construction mitigation measures include avoiding disturbance to breeding birds by not undertaking vegetation clearance and demolition work during the bird breeding season, but where this would not be possible, measures to avoid harm to birds and their nests would be implemented as appropriate. No measures are identified within the ES. Please can the Applicant describe the circumstances in which works would take place during the breeding season, and identify the potential mitigation measures that would be implemented in that event?**
		Answer: Paragraph 3.6.11 of Chapter 3 within the Environmental Statement **[APP-048/Volume 6.1]** identifies that advanced works such as site clearance will be required ahead of the Scheme's main construction operations, noting that some of these works will coincide with the bird nesting season (March to August inclusive). Where possible, land entry would be negotiated by agreement to undertake pruning or advance vegetation

		removal works to prevent nesting birds causing delay to construction; however, where works unavoidably coincide with the bird nesting season, the contractor will be required to implement appropriate mitigation measures. These mitigation measures are detailed in Table 3-1 in Appendix 3.1 within the Environmental Statement **[APP-114/Volume 6.3]**, which provides the Register of Environmental Actions and Commitments for the Scheme.
1.7.14	Applicant	**Question:** **It is understood that a detailed Biodiversity Management Plan (BMP) would be produced as part of the Construction Environmental Management Plan (CEMP), the aim of which would be to ensure the Proposed Development delivers biodiversity benefits over the long term. No reference is made to the BMP in the Outline Environmental Management Plan (OEMP) [APP-172], on which the CEMP would be based. Please can the Applicant clarify how it is secured in the DCO or any other legally binding application document?**
		Answer: The BMP will be secured through an amendment to the dDCO under Requirement 4. Requirement 4 does not currently refer to the BMP. This will be addressed in the next draft of the dDCO.
1.7.15	Applicant	**Question:** **ES para 9.9.102 [APP-054] notes that pre-construction checks, as detailed in the OEMP, would be undertaken pre-construction to confirm the status of otter activity on the watercourses within the Order Limits, and appropriate avoidance measures would be implemented in the event that they were found to be present. Examples of the avoidance measures have not been provided. Please can the Applicant provide examples of measures that may be implemented in this event, explain how they are secured, and indicate if any relevant statutory body, eg NE, would have any role in agreeing the measures and ensuring they are implemented, where required?**

		Answer: Table 3-1 in Appendix 3.1 within Volume 3 of the Environmental Statement **[APP-114/Volume 6.3]** provides the Register of Environmental Actions and Commitments for the Scheme and confirms that pre-construction surveys will be carried out for otter to avoid impacts on this species during construction. Appendix D within the Outline Environmental Management Plan **[APP-172/Volume 6.11]** contains an environmental control plan for ecology. Paragraph D.5.1.4 of Appendix D confirms that immediately prior to works taking place within a local authority watercourse affected by the Scheme, a watching brief shall be conducted by a licenced ecologist to assess the area for otter activity. The general control measures detailed in paragraph D.4.1.2 of Appendix D will limit the risk of impacts to otters, should they be found to be present. The greatest potential risk to otters will be the identification of a regularly used laying-up site or breeding site; however, as detailed in paragraphs 9.6.40 to 9.6.43 in Chapter 9 the Environmental Statement **[APP-054/Volume 6.1]** the presence of these features is considered unlikely as the available evidence is that otters make only occasional use of the habitats present. In the unlikely event that otters are confirmed to be present at any stage of construction, then suitable avoidance measures will involve the implementation of stand-offs. Stand-off distances will be determined by the supervising ecologist based on available evidence and the nature of the construction works and may vary from 20 metres (non-breeding locations) to 150 metres (breeding holts). Stand-offs will be demarcated using fencing and signage, and site operatives will be informed by the supervising ecologist of the presence of otters. An Ecological Clerk of Works will be provided, as necessary. The implementation of these avoidance measures is considered appropriate to manage the low risk of disturbance to otters. These measures will be secured through Requirement 4 of the dDCO **[APP-015/Volume 3.1]**, which states that the contractor's construction environmental management plan will be produced in accordance with the

		Outline Environmental Management Plan.
1.7.16	Applicant	**Question:** **It is noted that in relation to Bickenhill Meadows SSSI, dipwell monitoring, in order to record water table levels, is ongoing and is intended to continue for two years post-submission of the DCO application, the outcomes of which will be shred with NE. Further monitoring would be undertaken during construction (period to be agreed with NE) and the first five operational years of the Proposed Development, and would include hydrological and vegetation monitoring to determine the success of the mitigation solution. It is not indicated where this is secured in the DCO or other legally binding document, or what action would be taken in the event that the mitigation was found not to be effective. Please can the Applicant provide this information?**
		Answer: The answer to Question 1.7.11 above sets out the Applicant's updated position in relation to the SSSI mitigation. The Applicant is confident that this passive solution will provide effective mitigation. In the unlikely event that the mitigation is ineffective, the Applicant will implement the pumped solution as a fall back. Commitment G19 in the REAC sets out the Applicant's intention to agree the details of the SSSI mitigation with Natural England. Requirement 4 binds the Applicant to prepare a CEMP and HEMP that comply with the REAC. Rights over the land necessary to deliver the mitigation are included within the DCO. The Applicant is considering whether a new Requirement would be more appropriate to deliver the SSSI mitigation.
1.7.17	Applicant	**Question:** **In respect of Aspbury's Copse pLWS, it is explained in the ES that the effectiveness of the compensation measures would be evaluated through post-construction monitoring and that, where necessary, the data would inform the prescriptions for its future management, although it does not indicate what these could be. Please could the Applicant provide examples of management**

		measures that could be implemented, and indicate if any relevant statutory body, eg NE, would have any role in agreeing the measures and ensuring they are implemented, where required?
		Answer: The Applicant is seeking powers through the Development Consent Order to permanently acquire the compensation land identified for Aspbury's Copse ancient woodland. As title holders, the Applicant will be afforded powers to enforce any requirements relating to the future management of the compensation area over the long-term to ensure it achieves its intended function. Management of the compensation area will be guided by best practice relating to the management of newly planted woodland, and through consultation with Natural England. It is estimated to take at least 15 years for the planted trees within the compensation area to establish into a wooded area, during which time management of the area will be minimal and focused on periodic litter removal and boundary upkeep. As the area matures into a canopied woodland, flexible and adaptive management interventions comprising the selected thinning of trees, the retention of standing and fallen deadwood, and (if appropriate) coppicing will be undertaken to maximise structural diversity. Long-term monitoring of the woodland establishment and the extent of groundflora and deadwood will provide information on the condition of the compensation area. This information will be used to inform the longer term programme of woodland management, and to identify improvement opportunities – for example the creation of open or shaded areas to encourage plant variety, or to increase the abundance of deadwood habitat for fungi and lichens. Once established, scope exists for Solihull Metropolitan Borough Council (or relevant authority in power at that time) to designate the compensation area as a non-statutory site of nature conservation interest (i.e. a Local Wildlife Site) to protect the woodland from future development pressures.

1.7.18	Applicant	**Question:** **It is understood that the BMP would include monitoring measures to review the establishment of habitats and the use of ecological mitigation measures, eg mammal tunnels, by fauna, and that the result would be used to refine the management prescriptions in the BMP. Please can the Applicant provide examples of the potential management measures that could be implemented and indicate if any relevant statutory body, eg NE, would have any role in agreeing the measures and ensuring they are implemented, where required?**
		Answer: A detailed Biodiversity Management Plan (BMP) will be produced by the contractor as part of their Construction Environmental Management Plan, prior to the commencement of the works. The BMP will be secured through an amendment to the dDCO under Requirement 4. Requirement 4 does not currently refer to the BMP. This will be addressed in the next draft of the dDCO. The BMP will set out conservation-led objectives for monitoring the establishment and success of habitat creation and mitigation measures, and will also set out the responsibilities of the contractor within the three-five year contract period (after which any longer-term monitoring obligations will transfer to the Applicant). Examples of the potential monitoring measures that could be delivered through the framework of the BMP during the contract period are provided below. *Aspbury's Copse Ancient Woodland Potential Local Wildlife Site* The identified effects that the Scheme is predicted to have on Aspbury's Copse, and the effectiveness of the compensation measures (comprising the translocation of ancient woodland soils and new woodland planting) will be evaluated through monitoring. This will be undertaken within Aspbury's Copse and the ancient woodland receptor (compensation) area to: a. establish the composition and extent of ancient woodland indicator plant species (surveys are likely to be undertaken annually); and

		b. confirm the presence and extent of associated fungi and lichen species, and the abundance of deadwood material (surveys are likely to be undertaken every three to five years). This monitoring will serve to update the baseline data obtained to date and will be used to measure the success of the establishment of the compensatory woodland planting and evaluate its ecological function (which will be evidenced by the colonisation of woodland plant, fungi and lichen species). Where necessary, the assessment of monitoring data will inform the prescriptions for the future management of Aspbury's Copse and the receptor area, to support the continued maintenance of the conservation status of this woodland resource. *Castle Hill Meadows Local Wildlife Site* The identified effects that the Scheme is predicted to have on Castle Hill Meadows LWS, and the effectiveness of the compensation measures (comprising the translocation of grassland soils, creation of new species-rich grassland and conservation management) will be evaluated through monitoring, which will be undertaken within Castle Meadows, the new grassland and the grassland receptor area to: · establish the development of the new and translocated grassland, including their composition and extent (surveys are likely to be undertaken annually for a minimum of five years); and · establish whether the management prescription for the retained grassland is maintaining or driving the species composition to favourable status. This monitoring will serve to update the baseline data obtained to date, and will be used to measure the success of the establishment of the translocation and grassland creation and permit an evaluation of its ecological function (which will be evidenced by establishment of a species rich grassland). Monitoring of the translocated and sown grassland in the first five years will inform the prescriptions for any oversowing, weed control or other measures such as introduction of grazing. *Habitats*

		Monitoring will be undertaken within new grassland, woodland and scrub areas and the new hedgerows and retained habitats to: · establish the development of the new habitats, including their composition and extent (surveys are likely to be undertaken annually for five years); and · establish whether the management prescription for the retained habitats is maintaining or driving the species composition to favourable status. This monitoring will serve to update the baseline data obtained to date, and will be used to measure the success of the establishment of the new habitats created and permit an evaluation of their ecological function (which will be evidenced by establishment of the target habitat). The monitoring of the habitats in the first five years will inform the prescriptions for any oversowing, weed control or other measures such as thinning or introduction of grazing. *Adaptive Management* Should monitoring indicate that the establishment of habitats is either failing or not achieving the desired condition, then the prescriptions of management may be adapted to correct this. The principle of implementing adaptive management will form part of the Biodiversity Management Plan, and this principle will be agreed in advance with stakeholders including Natural England. Natural England would also be consulted where any alterations in management materially affected actions covered by a Protected Species licence.
1.7.19	Applicant	**Question:** **Please can the Applicant provide an update on progress in respect of the 'letter of no impediment' that they are seeking from NE in relation to protected species licences for badgers, bats and great crested newts?**
		Answer:

		Natural England has submitted letters of no impediment to the Applicant in respect of protected species licences, copies of which are contained in Appendix 9.18 (bats) and Appendix 9.19 (Great Crested Newt) within Volume 3 of the Environmental Statement **[APP-048/Volume 6.1]**. Surveys are being undertaken throughout 2019 to support the protected species licences required for the Scheme, the findings of which will be shared with Natural England once available.
1.7.20	Applicant and NE	**Question:** **Ancient Woodland** **ES paragraph 9.9.30 states that the loss of ancient woodland from Aspbury's Copse totals 0.46ha. ES Appendix 9.2, Appendix 1, Figure 1 depicts the anticipated loss of ancient woodland as 0.58ha. NE, in their response of 2 October 2018 to the Applicant, state the loss would be 0.33ha in total. Please could the Applicant and NE address these discrepancies?**
		Answer: The discrepancies identified within the Development Consent Order application documentation and correspondence between the Applicant and Natural England are noted. The variance in totals are a consequence of design refinements being made to the Scheme during September to December 2018, and the de-designation of parts of Aspbury's Copse as ancient woodland by Natural England during this period. The sum of 0.46 hectares recorded in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** represents the predicted total area loss of woodland resource within Aspbury's Copse ancient woodland resulting from the Scheme.
1.7.21	Applicant	**Question:** **Ancient Woodland**

		It is noted that an area of land to the south of Aspbury's Copse ancient woodland has been identified for new woodland planting (to compensate for the loss of ancient woodland resource), and for the translocation of ancient woodland soils and habitat. What is the Applicant's response to NE's view that the current compensation ratio of 3:1 is insufficient and disproportionate for irreplaceable habitat?
		Answer: The Applicant has sought to identify the effects of the Scheme on Aspbury's Copse ancient woodland and is seeking to compensate for these effects by securing land contiguous with the woodland within the dDCO application for replanting. The 3:1 compensation ratio presented in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** has taken into account the following factors and considerations: • The status of the Scheme as a Nationally Significant Infrastructure Project; • The need for the Scheme; • The form, status and condition of Aspbury's Copse ancient woodland; • The likely environmental effects of the Scheme on Aspbury's Copse ancient woodland; • The impacts on third parties or private property; and • There being no national precedent as to what is an acceptable compensation ratio for the loss of ancient woodland resource to development projects. The Applicant contends that the form, location and ratio of the compensation planting presents a proportionate response to the predicted effects of the Scheme on Aspbury's Copse ancient woodland.
1.7.22	Applicant	**Question:** **Ancient Woodland**

		Has the Applicant revisited the scale and form of the ancient woodland compensation package as requested by NE? **What is the Applicant's response to NE's view that effective compensation expectations are for more functional blocks of woodland as opposed to linear strips?**
		Answer: A large majority of the Scheme is located within Birmingham Airport's safeguarding zone (which delineates, and to a degree protects, the take-off and landing routes up to 13km from the airport). This constraint has influenced the environmental mitigation strategy for the Scheme. Throughout consultation, the airport authorities stipulated that no new planting in the zone(s) identified would be acceptable, on the grounds of a possible compromise to the safety of aircraft by penetrating the vertical alignment of the safeguarding zone and the introduction of habitat that facilitates and/ or encourages the movement of migrating flocks of birds. As such, planting of habitat required as essential mitigation and compensation areas for the Scheme have been located (where possible) outside the safeguarding zone. With this constraint in mind, the suitable area for the compensation planting for the impact to Aspbury's Copse was chosen to be outside this area. In addition, a key request from Natural England was to ensure that the compensation area would be contiguous with the existing ancient woodland parcel (for the purpose of habitat interconnectivity). The contiguous element of the compensatory planting resulted in only a small number of areas being considered as 'suitable' within the Order Limits. These areas were immediately surrounding Aspbury's Copse, where existing soils may reasonably be expected to be suitable for ancient woodland, and the majority falls outside the safeguarding zone. By identifying a parcel of land that is contiguous to the existing ancient woodland block that is also outside the airport safeguarding zone, the Applicant has worked with stakeholders with an interest in the ancient woodland whilst not compromising the operational safety of aircraft entering/ leaving Birmingham Airport. The proposed compensation area has an irregular 'form', with a block to the north and linear feature to the

		south. As part of an ecological network, individual blocks of habitat may be more resilient because, amongst other factors, they have reduced 'edge effects'. This refers to the fact that edges are often less stable environments and which, when compared to the central areas of habitat, may be subject to environmental change. The block area is large enough to receive the translocated soils and, when located centrally in this area, is also considered sufficient to protect the soils and associated flora and fauna from likely edge effects as the woodland matures. As detailed in the UK Government's Lawton report, in addition to 'blocks' (or care areas) a coherent and resilient ecological network comprise other features, including linear corridors. Linear habitats, such as those that are part of the current form of the proposed compensation area, therefore have a role contributing to the function of the network as a whole. On balance, although it is accepted that the linear feature will not develop as core woodland, it is considered to contribute to this woodlands function as part of an ecological network and therefore an appropriate part of the proposed compensatory measures. It is for the above reasons that the Applicant considers that given the constraints that the Scheme has had to recognise for its environmental mitigation and compensation strategy the scale and form of the compensation planting is appropriate.
1.7.23	Applicant	**Question:** **Ancient Woodland** **What consideration has been given to NE's suggestion to explore further woodland creation contiguous with the western half of Aspbury's Copse?**
		Answer: The Applicant has considered the option of creating an area of new woodland contiguous with the western half of Aspbury's Copse; however, this area of land is currently subject to a live (undetermined) planning application for a proposed motorway service area. Even though the Applicant is not treating the MSA as a committed development, it was concluded that the

		creation of woodland in this location would not be the most suitable location for ensuring the establishment and longevity of new woodland planting (including any translocated soils) to compensate for the effects associated with loss of ancient woodland resource within Aspbury's Copse.
1.7.24	NE	**Question:** **Ancient Woodland** **What does NE consider to be a sufficient and proportionate compensation ratio?**
		Answer: N/A
1.7.25	Applicant, NE and the Woodland Trust	**Question:** **Ancient Woodland** **The Applicant, NE and the Woodland Trust are asked how the success of the new woodland planting and translocation of ancient woodland soils and habitat might be affected by the proposed area being adjacent to the eastern boundary of the M42 motorway and new slip road?**
		Answer: The current M42 runs adjacent to the existing boundary of the ancient woodland. Surveys undertaken within Aspbury's Copse do not suggest that this proximity is to the detriment of the woodland or ancient woodlands

		marker species or criteria for ancientness. Currently there are no clear criteria as to what defines the 'success' of ancient woodland translocation, this is likely to be influenced by the proximity of the donor and receptor sites, the rarity of associated plant species, the timing of translocation, the protection of soils, the establishment of woodland conditions (soil, light, humidity) and the implementation of aftercare.[1] [2] Notwithstanding this, it is reasonable to assume the success of any new woodland planting would be affected by a number of factors, including poor-quality nursery stock, soil conditions, aftercare (including control of competition between plants and irrigation) and damage. (e.g. vandalism), where the majority of these factors will be managed through the implementation of best practice as part of the BMP. The remaining factor likely to be affected by proximity to the slip road is soil conditions, which could be influenced by aerial pollution or road spray from the road. Paragraphs 9.9.150 and Table 9.10 of Chapter 9: Biodiversity **[APP-054/Volume 6.1]** consider the effects of air pollution on Aspbury's Copse pLWS and demonstrate that any changes at the location of the remaining ancient woodland will be imperceptible. Paragraph 9.9.151 of Chapter 9: Biodiversity states the impact of traffic-related spray is considered to be limited to areas closest to the carriageway. As the woodland lies up-slope from the road surface it is considered that road spray would not affect the translocation area. As such, it is considered that none of the factors considered would be affected by proximity to the slip road. The slip road is anticipated to influence the impacts of light and humidity by defining where the woodland

[1] Ryan, L (2014) Translocation and Ancient Woodland. The Woodland Trust
[2] Craig, M., Buckley, P. & R., Howell (2015) Responses of an ancient woodland field layer to soil translocation: method & timing Applied Vegetation Science 18 pp579-590

		boundary and any associated 'edge effects' are located. As detailed in the answer to Question 1.7.22, the soils will be translocated to a central area in the receptor area that affords them greatest protection from edge effects resulting from altered light or humidity. This will assist the maintenance of the translocated soils ecological function as part of the wider woodland area. Therefore, it is considered that proximity of the slip road is unlikely to affect the translocation success. Of the factors identified, it is considered that only woodland condition could be affected by proximity to the road, as all other factors may be managed through best practice as detailed in OEMP and BMP, irrespective of their proximity to the slip road.
1.7.26	Applicant	**Question:** **Ancient Woodland** **It is noted that NE advised (in its response to the Applicant dated 2 October 2019) that a soil survey be carried out at the receiver site on the basis that evidence shows that translocations have only been successful where the receiver site soil types have been matched to the donor site. NE understand that such a survey was planned for October 2018. Can the Applicant confirm whether this has been carried out? NE's position is that if the soil types do not match, an alternative site (preferably close to another ancient woodland) should be sought. What is the Applicant's response to this?**
		Answer: The woodland soil survey is being completed in June 2019 and the results will be presented during the Examination. The receptor site for soil translocation is located immediately south of the ancient woodland of Aspbury's Copse pLWS and it is considered highly unlikely that the soil types would be incompatible due to their proximity. In the unlikely event that soil types of the proposed receptor do not match then the Applicant will re-consider

		applicable and proportionate mechanisms for compensating the loss to Aspbury's Copse ancient woodland in consultation with Natural England.
1.7.27	Applicant	**Question:** **Ancient Woodland** **What consideration has been given to mycorrhizae and mycelium network impacts?**
		Answer: Mycelium are the vegetative part of fungi (as opposed to the 'fruiting bodies' or toadstools, which are more readily seen above the ground) and comprise fine filaments that are able to form a network in the litter and soil layers. The network forms mutual associations with plants in the form of mycorrhiza, which can assist in water and mineral absorption and also protection from pathogens. Mycorrhizal relationships vary between different habitats, with ectomycorrhiza dominating in deciduous woodland, such as Aspbury's Copse. In particular the diversity of ectomycorrhiza are known to be dependent on the maintenance of nutrient poor conditions. These relationships are therefore complex and recognised as an essential part of the irreplaceable nature of this habitat, being sensitive to physical disturbance and nutrient enrichment. It is considered reasonable to anticipate that the careful translocation of woodland soils and plants will retain mycorrhizae and permit their re-establishment over time. This will be further enhanced by the current proposals to translocate young trees and saplings from Aspbury's Copse to the receptor area (which will carry associated mycorrhizae with them) and to retain deadwood and associated fungi in the translocation

		area. In some circumstances mycorrhiza can be inoculated into woodland in order to assist with tree health[1], and this approach could be considered as part of the adaptive management in response to on-going monitoring. The risk of nutrient enrichment at receptor will be mitigated through the careful site preparation (including removal of nutrient-rich topsoils) and careful handling of soils. It is therefore considered, the combination of measures already proposed as part of the translocation are sufficient to minimise impacts occurring as a result of disruption of the mycelium network.
1.7.28	Applicant	**Question:** **Ancient Woodland** **It is noted that Chapter 4 (alternatives) of the ES states that a southern junction option is considered to represent the only viable solution to improve Junction 6. It is also noted that paragraphs 4.4.19 to 4.4.21 of the ES state that the proposed layout of M42 Junction 5a was developed to reduce the impact of the scheme on ancient woodland at Aspbury's Copse. However, can the Applicant explain why the dumb-bell layout for Junction 5a cannot be moved further north to avoid or further minimise the encroachment of the southern slip roads and associated works into or immediately adjoining Aspbury's Copse, particularly as the scheme is not constrained by providing slip roads to the north?**
		Answer: The Applicant has evaluated a number of options as demonstrated in Chapter 4 of the ES. Furthermore, the siting of the preferred dumb-bell arrangement was assessed and explained in a Technical Note in Appendix

[1] Woodland Trust (2011) Technical note: native woodland creation—measures to mitigate drought conditions. Woodland Trust, Grantham

		4 to the Planning Statement **[APP-173/Volume 7.1]**, which sets out a range of factors that were also taken into account to determine the optimum location of the new Junction 5A design without north facing slip roads. The Technical Note highlights that to achieve a significant reduction on the impact to the Ancient Woodland at Aspbury's Copse, Junction 5A would have to be moved 50m north, this will result in a 55% reduction on the Ancient Woodland as noted in Appendix 4 to the Planning Statement. This however, would preclude the MSA planning application from installing north facing slip roads which was one of the factors considered when siting the Junction in the proposed location. As noted in paragraph 3.7 of Appendix 4, moving Junction 5A beyond 50m north of its current location would have several other impacts including on: a. residents of Bickenhill village; b. land take within the Green Belt; c. Bickenhill Meadows SSSI; and d. the 132kV overhead powerline.
1.7.29	Applicant	**Question:** **Ancient Woodland** **It is noted that the horizontal alignment of Solihull Road would remain largely the same as the existing to minimise land-take, although the new alignment would move off-line slightly to the north by 10m on the approaches to the overbridge, where the embankment height would be at its peak of 7.5m. Paragraph 3.5.21 of the ES explains that this offset would contribute towards reducing the amount of land-take required within Aspbury's Copse ancient woodland, and mitigating adverse impacts on properties to the south of the existing Solihull Road. However, if a new Solihull Road overbridge is to be built, can the Applicant explain why can't it, and the raised vertical alignment of its approaches, be positioned further to the north so as to avoid or further minimise encroachment into the Aspbury's Copse? Although the general arrangement drawings show relatively steep embankments to the raised sections of Solihull Road, they appear to take a considerable amount of**

		land around the edges of the Aspbury's Copse. How would such earthworks be constructed without causing additional harm?
		Answer: The Applicant has considered a number of options to position Solihull Road Overbridge further north up to 10m in order to reduce the impact on the ancient woodland. This would require increasing the vertical height of the overbridge to accommodate the rising slip road levels and subsequently the increased embankment heights on approach to the overbridge on Solihull Road, which will have the following impacts: • The increased embankment heights would have a visual impact on the adjacent properties to Solihull Road, east of the M42 motorway, • To achieve a safe horizontal and vertical alignment of Solihull Road Overbridge, greater land take would be required on both the east and west of the M42 Motorway, • Moving the overbridge further north would require increasing the span of the Solihull Road overbridge and incurring greater costs associated with the construction of the bridge, it would also require two additional structures to span over the slip roads as Solihull Road is located closer to the Junction 5A overbridge, and • A safe horizontal alignment connecting with the Solihull Road Overbridge on the eastern approach will impact upon the existing 400kV assets owned by National Grid leading to increased costs associated with utility diversions. The Applicant has included greater vertical and horizontal limits of deviation for Solihull Road overbridge in order to provide flexibility for this. This will be subject to further evaluation during the construction phase where the Applicant can assess the implications of risks associated with Health and Safety and quality due to constructing an offline overbridge parallel to the demolition works associated with the existing Solihull Road Overbridge.

		Based upon these factors, the Applicant considers that the limits of deviation prescribed in the Development Consent Order enable the maximum shift in the alignment of Solihull Road overbridge without introducing additional adverse impacts. In order to prevent damage to existing vegetation from the earthworks, commitment G11 in the REAC requires the CEMP to include measures for the protection and retention of trees in proximity to construction working areas.
1.7.30	Applicant, NE and the Woodland Trust	**Question:** **Ancient Woodland** **There appears to be little scope to provide effective buffer strips to Asbury's Copse alongside the southern slip roads so as to avoid root damage and to help protect the remaining ancient woodland from damaging edge effects, including chemical run off, air pollution, noise pollution, light pollution and litter. The ExA would welcome comments from the Applicant, NE and the Woodland Trust about this.**
		Answer: The potential for edge effects on Aspbury's Copse ancient woodland are considered in paragraph 9.9.36 to 9.9.38 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]**. Paragraph 9.9.150 and Table 9.10 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** consider the operational effects of air pollution on Aspbury's Copse and demonstrate that any changes in air quality at the location of the remaining ancient woodland will be imperceptible following the opening of the Scheme to traffic. The drainage design of the Scheme and the embedded mitigation measures described in paragraph 9.8.41 (g) in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** will mitigate the potential for significant operational effects as a result of altered run-off or lighting. Increases in littering at Aspbury's Copse are not anticipated as the area of woodland is not publicly

		accessible. Routine maintenance of the M42 Junction 5A slip roads adjacent to Aspbury's Copse will be undertaken by the Applicant's appointed area maintenance teams to clear any litter and debris from the road. Construction works within and in proximity to Aspbury's Copse will be guided by "British Standard BS:5837:2012 Trees in relation to design, demolition and construction", and by the Forestry Commission's and Natural England Standing Advice on woodland protection[1]. These documents provide guidance on the identification of working zones around trees to ensure the protection of their root systems and, where necessary, their canopies. The contractor will be required to identify appropriate working methods and protection areas around trees to be retained prior to the commencement of construction, the details of which will be contained within their Construction Environmental Management Plan and will be subject to approval in accordance with Requirement 4 of the dDCO. The Construction Environmental Management Plan will also detail the standard construction mitigation measures that will be employed by the contractor to control construction related run-off, changes in air emissions and noise levels, light spill and litter.
1.7.31	Applicant	**Question:** **Ancient Woodland** **Using the methodology set out in Chapter 5 of the ES, can the Applicant provide further justification to the findings for a magnitude of impact of moderate adverse, leading to a moderate adverse effect, as set out in ES paragraph 9.9.39? Moreover, as irreplaceable habitat can the Applicant provide further justification for the findings at paragraph 9.9.43 for a minor adverse magnitude of impact,**

[1] https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences (2018)

		resulting in a slight adverse effect in the design year in relation to habitat loss within Aspbury's Copse when compensatory measures are taken into account?
		Answer: Table 5.2 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** defines a moderate adverse impact as *'a loss of resource, but not adversely affecting the integrity'* or *'partial loss to key characteristics, features or elements'*. Paragraphs 9.9.34 to 9.9.39 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** set out how both the extent of habitat loss and increased edge effects may impact upon the quality of the remaining ancient woodland. Notwithstanding the impacts of the Scheme, which are acknowledged as likely to result in measurable alterations in the extent of woodland indicator plant species present (such as bluebell or wood anemone), the remaining area of ancient woodland at Aspbury's Cope is considered sufficient to maintain these species. The persistence of this flora may be considered an indicator of the continued integrity of the woodland, and it is therefore considered that the impact meets the definition of moderate i.e. the partial loss of a key characteristic and integrity not adversely affected. Table 5.2 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** defines a minor adverse magnitude of impacts as *'Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements'.* Paragraph 9.9.43 in Chapter 9 within the Environmental Statement **[APP-054/Volume 6.1]** explains that the combination of soil and deadwood translocation, compensatory planting and management will result in a minor magnitude of impact on Aspbury's Copse. This rating is considered appropriate as translocation will retain key elements of the ancient woodland that otherwise would be lost. Retention of ancient woodland soils are known to assist the colonisation of woodland (such as the proposed planted receptor area) by ancient woodland species, particularly in contrast to woodlands created on agricultural soils alone. Further, and as detailed in the response to ExQ 1.7.17, continual monitoring and the

		use of adaptive management measures aimed at maintaining ancient woodland flora will assist the success of translocation. Once the compensation woodland has matured by the design year, it is considered that the combination of measures will limit the extent of losses from woodland soils and/or associated flora, although small changes in key characteristic may be anticipated – for example, small or short-term changes in the abundance of indicator species. This is consistent with the criteria of a minor adverse magnitude of impact, resulting in slight adverse effect in the design year.
1.7.32	Applicant	**Question:** **Habitats Regulations Assessment (HRA)** **No reference is made to decommissioning of the Proposed Development in the NSER, however it is included in the screening matrices contained in Appendix D. The ExA notes that it is stated in ES Chapter 3 [APP-048] that decommissioning has not been considered in the ES on the basis that it is highly unlikely that it would happen. Please can the Applicant clarify whether decommissioning was considered in the HRA and provide updated matrices, if necessary, that correctly reflect the position. If decommissioning was considered, please explain the approach that was taken to the assessment.**
		Answer: Decommissioning of the Scheme was scoped out of the Environmental Impact Assessment (in accordance with Paragraph 2.3.4 of the Scoping Opinion **[APP-166/Volume 6.5]**). The screening matrices contained within the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]** identify the likely significant effects on European sites associated with construction, operation and maintenance of the Scheme. The content of these matrices is based on the matrix template contained within Appendix A of The Planning Inspectorate's Advice Note Ten – Habitats Regulations Assessment relevant to Nationally Significant Infrastructure Projects (2017), published by The Planning Inspectorate (2017).

		The reference to decommissioning in Appendix D within the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]** is included only as a consequence of it forming part of the matrix presented within Appendix A of Advice Note Ten. Although the standard format of the matrix presented within Appendix A of Advice Note Ten refers to decommissioning, this is not considered relevant to the assessment as decommissioning of the Scheme is highly unlikely to happen in the future, and therefore any such effects can be excluded from consideration within the screening exercise.
1.7.33	Applicant	**Question:** **Habitats Regulations Assessment (HRA)** **The location of the Cannock Extension Canal SAC is unclear. Although it is described as being located to the north east of the Proposed Development throughout the NSER it is depicted in Appendix B as being located to the north west. Please could the Applicant clarify its location and provide a corrected figure if necessary?**
		Answer: Table 5-1, Table 6-3 and Appendix E within the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]** state that the Cannock Extension Canal Special Area of Conservation is located to the north-east of the Scheme. This direction is incorrect, and this should read "north-west". The location of the Cannock Extension Canal Special Area of Conservation in relation to the Scheme is accurately depicted on the figure contained within Appendix B of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]**.
1.7.3	Applicant	**Question:**

4		**Habitats Regulations Assessment (HRA)** **It is not stated in the NSER whether the European sites and features to be included in the HRA and the methodology that was used were agreed with the statutory nature conservation body (SNCB) and/or other relevant body.** **i. Please can the NE confirm whether they are satisfied that the correct sites and features have been assessed in the NSER?** ii. **Please can the Applicant set out the extent of agreement with relevant consultees to the approach taken to undertaking the assessment?**
		Answer: The Applicant can confirm that a draft version of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]** was shared with Natural England on 17 September 2018. The draft document detailed the screening exercise undertaken to identify whether the Scheme would result in likely significant effects on the following European sites: Ensor's Pool Special Area of Conservation (SAC); Fens Pools SAC; Cannock Extension Canal SAC; and the River Mease SAC. A project update meeting was held between the Applicant and Natural England on 18 September 2018. During the meeting, Natural England stated that they had reviewed the draft document and confirmed to the Applicant that the organisation agreed with the findings of the screening exercise in that there would be no requirement for an Appropriate Assessment. This position was confirmed in writing in a letter from Natural England (dated 02 October 2018), in which Natural England stated: *"Natural England has reviewed the evidence contained in the applicant's draft (shadow) Habitat Regulations Assessment – No Significant Effects Report. The HRA screening exercise has concluded that there is no potential for Likely Significant Effects or Adverse Effects on the Integrity of any of the sites in question, either as a result of the scheme, either alone or in combination with other plans or projects. Given the intervening*

<table>
<tr><td></td><td></td><td>distance and the lack of specific environmental pathways between the application site and the designated sites in question, NE concurs with its conclusions."

A copy of the 02 October 2018 letter is available within Appendix 9.17 of the Environmental Statement [APP-144/Volume 6.3].</td></tr>
<tr><td rowspan="2">1.7.35</td><td rowspan="2">Applicant</td><td>Question:

Habitats Regulations Assessment (HRA)

The ExA notes that it is explained in the NSER that the data used to assess the potential effects on European sites was that collected for the purposes of the EIA and described in the ES, which included ecological surveys, however the details and location of the relevant information within the ES is not identified. Please can the Applicant identify the specific data/reports used to inform the HRA and identify the location of this information within relevant application documents?</td></tr>
<tr><td>Answer:

The Applicant can confirm that the following information gathered as part of the Environmental Impact Assessment was used to inform the screening of potential effects on European sites, the findings of which are reported within the Habitats Regulations Assessment No Significant Effects Report [APP-169/Volume 6.8].
<table>
<tr><th>Information Type</th><th>Details</th><th>Document / Location</th></tr>
<tr><td>Statutory International Nature Conservation Designations</td><td>Records and citations of all statutory international nature conservation designations (European sites) located within 30km of the Scheme were obtained and reviewed as part of the biodiversity assessment desk study, the purpose of which was to establish their function, structure, species, habitats, key elements and features, and geographical relationship to the</td><td>Table 9.4 within Chapter 9 of the Environmental Statement [APP-054/Volume 6.1].</td></tr>
</table>
</td></tr>
</table>

				Scheme. No specific surveys of the designated sites were undertaken as desk study data was considered sufficient. Surveys within the Order Limits provided detailed information on the likelihood of any linkages or potential impact pathways with the identified European sites, for example, the location of watercourses.	
			Landtake effects	The extents of land contained within the Order Limits was reviewed to establish whether any temporary or permanent landtake would be required from the identified European sites.	Figure 2.1 within the Environmental Statement **[APP-065/Volume 6.2]**.
			Air pollution effects	The geographical relationship between the identified European sites and the extents of the Affected Road Network identified within the air quality assessment was reviewed to determine whether potential exists for the Scheme to result in changes in air quality at these sites from vehicle emissions.	Figure 6.3 within of the Environmental Statement **[APP-081/Volume 6.2]**. Figure 6.4 within of the Environmental Statement **[APP-082/Volume 6.2]**.
			Water quality effects	Information contained within the road drainage and the water environment assessment relating to water quality was reviewed to establish whether changes arising from the Scheme could potentially affect those identified European sites dependent on water.	Section 14.9 within Chapter 14 of the Environmental Statement **[APP-059/Volume 6.1]**.
			Noise and vibration effects	Information contained within the noise and vibration assessment was reviewed to identify if the Scheme would lead to changes in existing noise levels or vibration experienced at the identified European sites.	Section 12.9 within Chapter 12 of the Environmental Statement **[APP-057/Volume 6.1]**.
			Lighting effects	Information contained within the project description	Section 3.5 within Chapter 3 of the

			was reviewed to establish whether road lighting forming part of the Scheme would potentially affect the identified European sites.	Environmental Statement **[APP-048/Volume 6.1]**.
		Transportation effects	Information contained within the project description and air quality assessment was reviewed to establish whether construction works, for example road closures, diversions and changes to traffic volumes, would potentially affect the identified European sites.	Section 3.6 within Chapter 3 of Environmental Statement **[APP-048/Volume 6.1].** Section 6.9 within Chapter 6 of the Environmental Statement Environmental Statement **[APP-051/Volume 6.1].**
		Climatic effects	Information contained within the climate assessment was reviewed to establish whether the Scheme would result in changes to the climatic conditions of the identified European sites.	Section 15.9 within Chapter 15 of the Environmental Statement Environmental Statement **[APP-060/Volume 6.1]**.
1.7.36	Applicant	**Question:** **Habitats Regulations Assessment (HRA)** **The approach that was taken to the in-combination assessment in the NSER is unclear. No details of the other plans and projects considered or cross-reference to such information contained elsewhere in the application documents is provided in the NSER. The conclusion in Section 7 does not appear to address the potential for a non-significant effect alone to become significant in combination with effects of other plans and projects. Please can the Applicant provide details of the other plans and projects that were considered in the assessment, and justify this conclusion?**		
		Answer: The screening exercise considered the potential for in-combination effects to occur as a result of the Scheme and other plans and projects, the outcomes of which are presented within Appendix D of the		

		Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]**. Paragraph 3.2.22 of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]** states that an in-combination assessment is not undertaken where there is no possibility for the Scheme to contribute to an in-combination effect from the pathways identified (when acting alone), or where the effects predicted are considered so weak that no significant contribution to any in-combination effects would occur. Based on the findings of the screening exercise, and in line with the approach set out in paragraph 3.2.22 of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]**, it was not considered necessary to assess and report any potential in-combination effects between the Scheme and the plans or projects presented within Chapter 16 of the Environmental Statement Report **[APP-061/Volume 6.1]** (these forming the basis of the assessment of cumulative effects carried out as part of the Environmental Impact Assessment). The conclusion of the screening exercise was that the Scheme (either alone or in combination) will not affect any of the identified European sites.
1.7.37	Applicant	**Question:** **Habitats Regulations Assessment (HRA)** **The screening matrices for the Cannock Extension Canal SAC (D-4) and the River Mease SAC (D-5) reference the construction stage only in respect of hydrological disturbance and omit construction in relation to in-combination effects. No explanation for this is provided. Please can the Applicant clarify whether this was a textual error and provide corrected matrices if so, or explain the approach if this was not an error?**
		Answer: The construction, operation and decommissioning stage effects reported in Table D-4 and Table D-5 within Appendix D of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]**

are accurate; however, the table headers contain minor presentational errors.

Corrected matrices are provided below. For clarity, updates to the table headers are presented in red text.

Table D-4 – Screening matrix for Cannock Extension SAC

Name of European site and designation: Cannock Extension Canal SAC						
EU Code: UK0012672						
Distance to NSIP: 27.1km						
European site features	**Likely effects of NSIP**					
Effect	**Hydrological Disturbance**			**In combination effects**		
Stage of Development	**C**	**O**	**D**	**C**	**O**	**D**
1831 Floating water-plantain *Luronium natans*	×e	×e	×e	×f	×f	×f

Table D-5 – Screening matrix for River Mease SAC

Name of European site and designation: River Mease SAC
EU Code: UK0030258

			Distance to NSIP: 27.7km						
			European site features	**Likely effects of NSIP**					
			Effect	**Hydrological Disturbance**			**In combination effects**		
			Stage of Development	**C**	**O**	**D**	**C**	**O**	**D**
			3260 Water courses of plain to montane levels with *Ranunculion fluitans* and *Callitricho-Batrachion* vegetation	×g	×g	×g	×h	×h	×h
			1163 Bullhead *Cotus gobio*	×g	×g	×g	×h	×h	×h
			1355 Otter *Lutra lutra*	×g	×g	×g	×h	×h	×h
			1092 White-clawed crayfish *Austropotamobius pallipes*	×g	×g	×g	×h	×h	×h

		1149 Spined loach *Cobitis taenia*	×g	×g	×g	×h	×h	×h	

1.7.38	Applicant	**Question:** **Habitats Regulations Assessment (HRA)** **Appendix D Screening Matrix D-3 (Fens Pools SAC) incorrectly records the EU Species Code for the great crested newt as 1156 instead of 1166 (as shown on the Natura 2000 Standard Data Form and Natural England's Fens Pools SAC Conservation Objectives document). Please can the Applicant include this correction in any updated version of this matrix.**
		Answer: The EU Species Code for great crested newt presented in Table D-3 within Appendix D of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]** is inaccurate. A corrected matrix is provided below. For clarity, updates to the matrix are presented in red text. **Table D3 – Screening matrix for Fens Pools SAC**

Name of European site and designation: Fens Pools		
EU Code: UK0030150		
Distance to NSIP: 27.5km		
European site features	**Likely effects of NSIP**	
Effect	**Hydrological Disturbance**	**In combination effects**

		<table><tr><th>Stage of Development</th><th>C</th><th>O</th><th>D</th><th>C</th><th>O</th><th>D</th></tr><tr><td>1166 Great crested newt *Triturus cristatus*</td><td>×c</td><td>×c</td><td>×c</td><td>×d</td><td>×d</td><td>×d</td></tr></table>
1.7.39	Applicant	**Question:** **Habitats Regulations Assessment (HRA)** **Evidence Notes b), d), f), and h) in the Screening Matrices, in respect of in combination effects for each of the four European sites, cross-refer to paragraph 8.1.2 of Section 8 (NSER Conclusions), which contains a conclusion that the Secretary of State will not need to undertake an appropriate assessment. This does not appear to relate specifically to in-combination effects. Please can the Applicant confirm the position and correctly identify the location of the relevant evidence?**
		Answer: The Evidence Notes for b), d), f) and h) within Appendix D of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]** incorrectly cross-reference to paragraph 8.1.2 of the document. Corrected Evidence Notes are provided below. For clarity, updates are presented in below. b) Any effects of the Scheme upon Ensor's Pool SAC would be so small that they are not considered to merit further consideration, and therefore no in-combination effects with other projects or plans are anticipated (Table 6-1 & Paragraph 7.1.2) d) Any effects of the Scheme upon Fens Pools SAC would be so small that they are not considered to merit further consideration, and therefore no in-combination effects with other projects or plans are anticipated (Table 6-2 & Paragraph 7.1.2)

		f) Any effects of the Scheme upon Cannock Extension Canal SAC would be so small that they are not considered to merit further consideration, and therefore no in-combination effects with other projects or plans are anticipated (Table 6-3 & Paragraph 7.1.2) h) Any effects of the Scheme upon River Mease SAC would be so small that they are not considered to merit further consideration, and therefore no in-combination effects with other projects or plans are predicted (Table 6-4 & Paragraph 7.1.2)
1.7.40	Applicant	**Question:** **Habitats Regulations Assessment (HRA)** **It is noted in NSER Section 6 Tables 6-1 to 6-4 that no formal consultation had yet been undertaken with the relevant statutory bodies. Please can the Applicant state whether subsequent consultation has taken place, particularly with NE, and indicate the extent of any agreement with the conclusions of the HRA?**
		Answer: The screening exercise considered the potential for in-combination effects to occur as a result of the Scheme and other plans and projects, the outcomes of which are presented within Appendix D of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]**. Paragraph 3.2.22 of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]** states that an in-combination assessment is not undertaken where there is no possibility for the Scheme to contribute to an in-combination effect from the pathways identified (when acting alone), or where the effects predicted are considered so weak that no significant contribution to any in-combination effects would occur. Based on the findings of the screening exercise, and in line with the approach set out in paragraph 3.2.22 of the Habitats Regulations Assessment No Significant Effects Report **[APP-169/Volume 6.8]**, it was not

		considered necessary to assess and report any potential in-combination effects between the Scheme and the plans or projects presented within Chapter 16 of Volume 1 of the Environmental Statement Report **[APP-061/Volume 6.1]** (these forming the basis of the assessment of cumulative effects carried out as part of the Environmental Impact Assessment). The conclusion of the screening exercise was that the Scheme (either alone or in combination) will not affect any of the identified European sites.
1.8	**Noise and Vibration – ES Chapter 12**	
1.8.1	Applicant	**Question:** **Baseline** **No baseline vibration data has been provided or cross-referenced in the ES. Please can the Applicant either provide the survey data on which the vibration baseline was determined or explain why it was not considered necessary to include it.**
		Answer: 1. The assessment of construction vibration effects is based on compliance with absolute criteria, not the change from an existing level. This is detailed in paragraphs 12.3.27-12.3.34 of Chapter 12 of the ES **[APP-057/Volume 6.1**]. 2. The baseline survey has been agreed with Solihull Metropolitan Borough Council (SMBC), as detailed in the scoping report (Ref) and in paragraphs 12.3.15-12.3.18 of Chapter 12 of the ES **[APP-057/Volume 6.1.** As detailed in paragraph 12.4.13 of the ES, the consultation with SMBC has not identified any local roads where there are vibration complaints. Given the absence of existing potentially significant sources of vibration in the area, and the discussion with SMBC, no baseline vibration monitoring was proposed or undertaken

1.8.2	Applicant	**Question:** **Mitigation and monitoring** **No additional mitigation has been proposed although significant adverse construction noise effects have been identified on a number of receptors in the noise and vibration assessment. Please can the Applicant explain the extent to which they have considered implementing additional mitigation measures to address these effects and why they were not progressed.**
		Answer: Chapter 12 Noise and Vibration of the ES **[APP-057/Volume 6.1**] paragraph 12.3.22 confirms that at the time of the assessment, precise information on the construction works was not available. The quantitative assessment is, therefore, based upon reasonable worst-case information and assumptions on the likely works. Paragraphs 12.8.3, 12.8.5-12.8.10, 12.9.8-12.9.9 and 12.9.93-12.9.94 of the ES outlines the forms of mitigation to minimise construction noise effects. This includes the preparation of an Outline Environmental Management Plan (OEMP) **[APP-172/Volume 6.11]** and a Construction Environmental Management Plan (CEMP), and sets out the likely requirement for solid site hoarding/ barriers. It has not been considered practical at this stage, in the absence of detailed Scheme specific construction information, to explore additional specific mitigation measures. The OEMP and CEMP will provide the mechanism to reassess the scheme of mitigation, including any additional requirements, based upon detailed construction information. As detailed in Paragraphs 12.9.93-12.9.94 of the ES, the appointed Contractor will review the proposed working methods to consider all mitigation measures, including the potential use of noise insulation and temporary re-housing during construction, with the aim of avoiding significant adverse effects.
1.9	**Road Drainage and the Water Environment – ES Chapter 14**	

1.9.1	Applicant	**Question:** **Baseline** **Both the Environmental Statement and the Flood Risk Assessment state that hydraulic modelling was undertaken of flood levels on the land surrounding Hollywell Brook that demonstrated that it is in Flood Zone 1 (FZ1) and not FZ3, as suggested on the Environment Agency's (EA's) 'Flood Map for Planning'. Please could the Applicant state whether this conclusion and therefore the approach to the assessment was agreed with the EA.**
		Answer: The Environment Agency has not been consulted as part of the modelling and assessment process. The work carried out was normal practice and not considered to need advanced consultation with the EA. The Environment Agency's "Flood Map for Planning" represents the Agency's current understanding of flood risk but has initially been based on a very coarse data and modelling approach. This is being improved as the Agency carries out flood mapping studies and other projects; however, these are focussed on major flood risk areas first and therefore no modelling was available at the Junction 6 location. The Applicant initially carried out channel capacity checks, based on the available survey data. This highlighted that the Agency results for this location may have contained inaccuracies. Following this, the Applicant then carried out further 1D modelling to check the findings. The Environment Agency has not raised any concerns regarding this matter.
1.9.2	Applicant	**Question:** **Methodology** **The ES chapter identifies and provides justification for scoping a number of matters out of the assessment: impacts from maintenance activities; and impacts on the Grand Union Canal and the Coleshill and Bannerly Pools.**

		Please can the Applicant indicate whether this approach was agreed with any relevant stakeholders.
		Answer: Natural England was consulted on the PEI Report and its response included agreement that the Coleshill and Bannerly Pool SSSI was unlikely to be impacted. The Canal & River Trust was contacted for clarification with regards to the Grand Union Canal and confirmed that it had no specific concerns. With regards to maintenance activities, it was stated in paragraph 14.3.7 of Chapter 14: Drainage and the Water Environment within the ES **[APP-059/Volume 6.1]** that there would be limited potential for significant effects. Agreement on this issue is being sought from the Environment Agency and Lead Local Flood Authority through development of Statements of Common Ground. **Coleshill and Bannerly Pools SSSI** Natural England was consulted regarding the PEI Report for the Scheme, and responded on 2 October 2018 (Reference 257747 M42 J6 s42 PEIR FINAL1) as follows with regard to the Coleshill and Bannerly Pools SSSI: *"The application site is located in close proximity to the following sites which are also notified at a national level as Sites of Special Scientific Interest (SSSI's):* • *Bickenhill Meadows SSSI;* • *The River Blythe SSSI; and* • *Coleshill and Bannerly Pools SSSI.* *Natural England has considered the evidence and advises that the development is unlikely to impact upon the special features of either The River Blythe SSSI or Coleshill and Bannerly Pools SSSI".* Given that Natural England agreed that there was unlikely to be any impact on the Coleshill and Bannerly Pools SSSI, it was deemed appropriate to continue to scope this receptor out of the Road Drainage and Water Environment assessment due to the following reasons outlined in the ES, "*these pools are not considered by the assessment in this chapter due to their distance from any physical works* [the

		southernmost extent of the SSSI is over 1 km north of any major construction works on the M42, excluding works to signage which is not considered to have an impact] *and lack of hydrological connectivity to upstream waterbodies that intersect the Scheme*."
1.9.3	Applicant	**Question:** **Assessment of Effects** **ES Chapter 14 para 14.9.1 [APP-059] notes that the assessment has taken into account the embedded and standard mitigation measures, and the 'additional measures' identified in Section 14.8. It is unclear to what this refers, as it is stated in Section 14.8 that it describes standard and embedded mitigation, and no reference is made to any additional mitigation measures. ES Chapter 17 [APP-062] does not identify any additional mitigation proposed in respect of this aspect. Please can the Applicant explain the apparent discrepancy, identify any measures that are considered to be additional mitigation, and indicate where they are defined and secured within the DCO application documents.**
		Answer: This is a typographical error, and no other 'additional' measures are included in Chapter 14 of the ES. All mitigation measures taken into account by the impact assessment presented in Chapter 14 are described in Section 14.8 and 14.10 (which specifically describes monitoring proposals). Section 14.8 refers to the OEMP **[APP-172/Volume 6.11]** where further details of the proposed standard mitigation with regards to the construction phase of the project are presented.
1.9.4	Applicant	**Question:** **ES para 14.9.11 [AP-059] notes that any discharges to surface water of 'unclean runoff' would require a Water Activity Permit from the EA. Para 14.9.67 states that the final position and orientation of each of the proposed outfalls would be subject to decisions relating to micro-siting during final design and agreed with the EA or SMBC as part of the application process for Environmental**

		Permits (EPs) for works to Main Rivers or Ordinary Watercourse Consents. **Please can the Applicant provide information on the progress made with any applications for EPs/Consents, or set out the anticipated programme for making such applications.**
		Answer: **SMBC** Highways Services at SMBC was consulted via email regarding consents for ordinary watercourses (with emails received on 31/1/19 and 1/2/19). It was stated that, "*It would make sense to wait for the DCO decision, but thereafter it is entirely up to you when you wish to submit your consent applications*". As such, it is proposed to apply for consents immediately following on from the DCO decision. The locations of outfalls to ordinary watercourses will be finalised during the subsequent detailed design stage required before construction can commence. However, it is not considered that the locations reported in ES Appendix 14.5: 'Drainage Strategy Report' [APP-160], Appendix D (Preliminary Drainage Design Layouts) will change significantly. **Environment Agency** The Environment Agency will be consulted at the appropriate time regarding Environmental Permits for Main Rivers or Water Activity Permits. Hollywell Brook and the Shadow Brook are both designated Main Rivers to the east of the M42 motorway. A risk register has been compiled outlining the permits that are anticipated to be required. With regard to the Road Drainage and the Water Environment assessment the following activities have been identified as likely to require a permit from the Environment Agency: • Road outfalls (through swales or a headwall) to Hollywell Brook requires a Flood Risk Activity: Environmental Permit; • Potential erosion protection to Hollywell Brook associated with installation of road outfalls requires a Flood Risk Activity: Environmental Permit;

		• Alterations to Hollywell Brook culvert beneath the M42 require Flood Risk Activity: Environmental Permit; • Any service crossing below the bed of a main river (Hollywell Brook or Shadow Brook) not involving an open cut technique will require a Flood Risk Activity: Environmental Permit; • Temporary structures that may change water level of Hollywell Brook and Shadow Brook downstream of M42 (Main Rivers) would require a Flood Risk Activity: Environmental Permit and may require an impoundment license; • Discharges from construction sites – temporary discharges to surface or ground water to construct a highway would require Environmental Permit required by the EA for discharge of surface water run-off to Main Rivers and Ordinary Watercourses. To assist the ExA, the application period for a 'Flood Risk Activity: Environmental Permit' is 2 months, and that for Discharges to surface water and groundwater: Environmental permits' is 4 months. As with consents from SMBC, it is considered prudent to wait for the DCO decision, and apply for permits immediately thereafter. Through the process of obtaining a Statement of Common Ground with the Environment Agency, the Applicant will seek to obtain agreement in principle for the required permits. During construction other permissions from the Environment Agency may be required (e.g. for any significant dewatering or discharging anything but 'clean' water into a controlled watercourse. It is not possible to determine the full need and nature of such applications at this stage. However, as temporary consents these are unlikely to be material to the delivery of the Scheme.
1.9.5	Applicant	**Question:** **Descriptions of the anticipated location of the outfalls according to the preliminary drainage design layout for the Proposed Development are contained in ES Appendix 14.5: 'Drainage Strategy Report' [APP-160], Appendix D (Preliminary Drainage Design Layouts) of which depicts the proposed locations.** **Please can the Applicant explain how these were taken into account in reaching the conclusion of no**

		likely significant effects.
		Answer: In reaching a conclusion of no likely significant effects, the road outfall locations to the larger watercourses in the study area were visited on the site walkover undertaken to inform the Road Drainage Water Environment Assessment. The proposed outfall locations visited included Networks 1B (to Shadow Brook), Network 3 (tributary to Shadow Brook), Network 4 (tributary of Low Brook), Network 5, 11, 12 and 15 (all to Hollywell Brook), and Network 6 (ditch to Pendigo Lake). The site walkover enabled the character of the outfall locations and the sensitivity of receptors to be assessed, and morphological importance to be defined for watercourses, as outlined in paragraph 14.9.2 of Chapter 14 the ES **[APP-059/ Volume 6.1]**. This morphological importance was used to assess the significance of effects, as per the methodology as presented in the Chapter 14 of the ES. The outfall locations not visited on site were all artificial agricultural or highway drainage ditches, namely Networks 1A (ditch at Four Winds), Network 2A, 2B, 13 and 14 (ditches at Clock Interchange), Network 8 (ditch in the catchment of the Blythe), and Network 10 (ditch at Eastway roundabout). These have been viewed on aerial photography and online Ordnance Survey mapping and are all highway and agricultural ditch-courses and are similar in character to other artificial ditches seen in the study area. As such, they are considered to be of low morphological importance as they are artificial, and lack morphological features and functional flows. This low importance for morphology was used in the assessment of significance of effects, using the methodology as presented in the ES chapter.
1.9.6	Applicant	**Question:** **It is stated in ES Chapter 14 that EPs for outfalls to Shadow Brook and Hollywell Brook may only be required where the outfalls would be greater than 300mm in diameter, which indicates that the design of the outfalls have not yet been finalised. However, the conclusion in the assessment of a neutral effect is based on the outfalls being of limited size and of 'good design'. Please can the Applicant identify the maximum design parameters for the outfalls, including the anticipated volume**

		of water that each would discharge, and explain how these parameters relate to the assessment conclusion.
		Answer: The design parameters used were peak discharge flows in accordance with Design Manual for Roads and Bridges (DMRB), HD 33/16. These have been assessed accordingly as stated in section *14.3.9* and subsequent sections of Chapter 14 of the ES **[APP-059/Volume 6.1]**. The network flows discharging into the watercourse are restricted (via orifices/hydro-brake etc.) to the allowable Peak discharge rates, as stated in table 4.3. (Peak Discharge Rates) of the Drainage Strategy Report in Appendix 14.5 of the ES. Peak discharge rates for the outfalls have been calculated for the various networks, based on the 1 in 100 year storm event. The assessment presented in ES Chapter 14 with regard to the morphological impact of road outfalls indicated a neutral significance of effect to all watercourses. This was on the basis that all outfalls were to be installed to waterbodies considered to be of low importance in terms of their morphology with the exception of Hollywell Brook which is of medium importance as stated in paragraph 14.9.2 of the ES. The outcome of the assessment as stated in paragraph 14.9.67 explains that outfalls would be micro-sited during final designs and agreed with the Environment Agency or SMBC (as Lead Local Flood Authority) as part of the application process for Environmental Permits for works to Main Rivers or Ordinary Watercourse Consent (to all other watercourses). While final designs for outfalls have not been finalised, it is assumed that the required permits and consents would ensure that final outfall design are sensitive with regards to morphology. Any residual point impact would be very localised and is not considered significant at the scale of the whole waterbody. As such, the localised point impact was assessed as negligible for all watercourses, giving rise to the neutral significance of effect.
1.9.7	Applicant	**Question:** **In relation to the potential risk of flooding from groundwater sources during construction, ES para 14.9.27 concludes that there would be a neutral effect as a result of measures included in a**

		comprehensive groundwater mitigation strategy which would be considered at the detailed design stage of the Proposed Development. No reference is made to such a strategy in the Outline Environmental Management Plan (OEMP), Register of Environmental Actions and Commitments (REAC) or the draft Development Consent Order (dDCO). **Please can the Applicant describe the measures that would constitute the mitigation strategy and explain how this mitigation is secured within the application.**
		Answer: The measures that would comprise a groundwater mitigation strategy are presented within the existing Outline Environmental Management Plan (OEMP) **[APP-172/Volume 6.11]** and would be secured by Requirement 4. While these have not explicitly been referenced as the 'groundwater mitigation strategy' within the OEMP, it is considered that these measures are sufficient. This strategy would include 'Flood Risk' and the 'Dewatering' Measures from the OEMP, as outlined in paragraphs L4.1.6-L4.1.11 and L5.1.1-L5.1.8. No further measures are proposed.
1.9.8	Applicant	**Question:** **In respect of the potential risk of flooding from drainage infrastructure during construction, ES para 14.9.29 concludes that there would be a neutral effect on the assumption that the appointed contractor would liaise closely with the applicable utility provider regarding the diversion and protection of such assets. No further information is provided on what this would entail in practice and no measures appear to be specified in any application document. Please can the Applicant explain what actions would be taken by the contractor and how this mitigation is secured within the application.**
		Answer: The following tasks would be undertaken by the Contractor with regards to the management of utilities on

		Site, including water mains and sewers that could result in localised flooding: • The Contractor will request existing utility and drainage drawings from both the sewer and water main asset owner and the local highway authority to identify existing assets impacted by the scheme either in the temporary or permanent state. • The Contractor will undertake surveys (consisting of unobtrusive and intrusive methods) to confirm the asset locations. Topographical surveys will also be undertaken to confirm drainage levels and outfall locations. • Where practicable the detailed design will be developed to avoid the asset or to permit protection measures to be utilised. • Where diversions are unavoidable and required these will be developed and designed with the asset owner to ensure all appropriate permissions are obtained and the required design standards met. This mitigation is secured by Schedule 10 to the DCO which contains protective provisions for the benefit of the water and sewerage undertaker.
1.9.9	Applicant	**Question:** **There appears to be an inconsistency in relation to the assessment of the impacts of routine road runoff set out within para 14.9.47. It is concluded first that there would be a moderate beneficial effect (significant) and subsequently that there would be a slight beneficial effect (not significant) on the ditch to Shadow Brook. Please can the Applicant clarify this point.**
		Answer: This is not an inconsistency. The second sentence of para 14.9.47 Chapter 14 is stating the magnitude of *impact*, which is moderate beneficial for both Hollywell Brook and the ditch to Shadow Brook. Due to their different importance (Hollywell Brook is considered high importance, and the ditch to Shadow Brook, is considered to be of low

		importance) this gives a significance of *effect* of Moderate Beneficial (for Hollywell Brook) and Slight Beneficial (for the ditch to Shadow Brook).
1.9.10	Applicant	**Question:** **Mitigation and Monitoring** **The ES does not include a table, as advised in Planning Inspectorate Advice Note 7 (AN7), that identifies all the proposed mitigation measures and the mechanisms by which they are secured. The Register of Environmental Actions and Commitments (REAC) sets out the Applicant's commitments to address the potential environmental effects of the Proposed Development but is described as including commitments to 'certain key items of embedded mitigation'. Please can the Applicant provide the required information in respect of all the proposed mitigation in tabular form, as requested in AN7.**
		Answer: Please refer to the response to ExQ 1.3.1 which provides the requested schedule of mitigation measures relied upon in the Environmental Impact Assessment, and the mechanisms by which they are to be secured.
1.9.11	Applicant	**Question:** **Mitigation and Monitoring** **Although the proposed drainage strategy, contained in the Drainage Strategy Report [APP-160], sets out proposed mitigation measures no cross-reference is made to it in the REAC [APP-114] or in dDCO Requirement 8 [APP-015], which requires that the Proposed Development cannot commence until written details of the surface and foul water drainage system, that reflect the mitigation set out in the REAC, have been approved. Please can the Applicant indicate how the measures contained within the Drainage Strategy, on which relevant assessment conclusions are based, are secured within the application.**

		Answer: The proposed mitigation measures contained within Drainage Strategy Report [**APP-160/Volume 6.3**] will be secured through an amendment to the draft DCO under Requirement 8. This Requirement does not currently refer to the proposed drainage mitigation. This will be addressed in the next draft of the dDCO.
1.9.12	Applicant	**Question:** **Mitigation and Monitoring** **It is stated in ES Chapter 14 para 14.9.44 [APP-059] that the proposed mitigation for impacts resulting from the routine road runoff of the proposed outfalls was approved by both the EA and Birmingham Airport. Please can the Applicant identify the location of the evidence demonstrating this agreement.**
		Answer: The correspondence demonstrating the proposed attenuation and treatment proposals for the scheme are approved by the Environment Agency and Birmingham Airport are appended to this document **in Appendix A.**
1.9.13	Applicant	**Question:** **Mitigation and Monitoring** **It is stated within the ES [APP-059] that the pumped solution proposed to mitigate the potential effects on the Bickenhill Meadows SSSI will continue to be refined using data obtained from the ongoing dipwell monitoring and information gathered from further analysis of the local topography and existing water sources, and that agreement to any refinements would be sought from Natural England prior to commencement of the Proposed Development. This is similarly set out in the REAC**

		[APP-114]. dDCO Requirement 8 [APP-015] provides that written details of the drainage system, that reflect the mitigation set out in the REAC, must be approved before the Proposed Development can commence. It appears that the final solution is not yet determined and would not be determined prior to DCO consent being granted, although the anticipated effects of the Proposed Development are based on the currently described pumping solution. Please can the Applicant indicate how it is secured within the DCO application that the post-consent final solution would achieve the required mitigation?
		Answer: The Applicant is continuing to collect data to identify the most suitable mitigation solution that takes into consideration the applicable stakeholders. At present the Applicant has progressed the mitigation solution from the pumped solution as per the DCO application to one that is passive in nature and would not rely upon a pumping regime to replenish water to the SSSI unit. These refinements and changes have been welcomed by Natural England and the Warwickshire Wildlife Trust through ongoing consultation. The passive and the pump solution are both capable of being consented and delivered through the dDCO,
1.10	**Assessment of Cumulative Effects – Chapter 16**	
1.10.1	Applicant	**Question:** **Methodology** **It is stated in the ES and appendices that nine developments were shortlisted from the long list of 45 developments considered in the cumulative effects assessment. However, only eight developments are described in ES Appendix 16.3 and shown on ES Figure 16.2. Please can the Applicant clarify the position?**

		Answer: As part of the cumulative effects assessment (CEA), the shortlisted developments (as per the methodology set out within Appendix 16.1: Cumulative Effects: Screening Methodology of the ES **[APP-161/Volume 6.3]** were rechecked to determine whether they met the criteria for inclusion into the assessment. This process of rechecking revealed that, during consultation with the SMBC Planning Department in March 2018, one of the developments (titled 'Land South of Solihull Parkway' on the long list of other developments) had already begun construction in 2018 and would be completed before construction of the M42 Junction 6 Scheme had begun. Consequently, this development was removed from the shortlist. The Applicant can confirm the information presented within Appendix 16.3: Short List of Developments of the ES **[APP-163/Volume 6.3]** correctly reflects the eight developments included within the assessment for consideration.
1.10.2	Applicant	**Question:** **Assessment of effect** **Although commentary is provided in Section 16.5 of Chapter 16 [APP- 061] about the anticipated cumulative effects during operation of the Proposed Development together with the extraction and processing of sand and gravel on land adjacent to and to the south of Common Farm, the conclusion of the assessment is not stated.** **In addition, the summary of cumulative residual effects provided in ES Chapter 17 [APP-062] makes no reference to any cumulative effects together with the sand and gravel development, although it is concluded in ES Chapter 16 in relation to construction that there would be moderate adverse effects on LCA 2.** **Please can the Applicant set out the conclusions of the assessment on the anticipated cumulative effects resulting from the two developments together during construction and operation of the Proposed Development.**

Answer:

Due to the nature of the sand and gravel site development, as stated in paragraph 16.5.18 of Chapter 16; Assessment of Cumulative Effects within of the Environmental Statement **[APP-061/Volume 6.1]**, there is no associated construction phase for this development and therefore no construction programme is available in the public domain.

To assess the worst-case, the landscape effects of the operational phase of the sand and gravel site development have been assessed against the construction phase and the operational phase of the Scheme, both of which recorded a cumulative effect of moderate adverse.

As this conclusion was not made explicitly clear in Chapters 16 and 17 within of the Environmental Statement **[APP-061 & 062/Volume 6.1]** or in Appendix 16.4 within the Environmental Statement **[APP-164/Volume 6.3**], the following presents the findings of the assessment in relation to landscape effects.

Sand and Gravel Site Landscape Effect	**Scheme's Landscape Effect**	**Cumulative Effect**
Operation – temporary large adverse effect on LCA 2	*Construction* – temporary large adverse effect on LCA 2	Moderate adverse
Operation – temporary large adverse effect on LCA 2	*Operation* – permanent large adverse effect	Moderate adverse

Although the landscape effect of the Scheme in isolation is permanent, given that the operational landscape

		effect of the sand and gravel site development is temporary, the cumulative effect of the Scheme and this development will be temporary.
1.10.3	Applicant	**Question:** **It is stated that the long list of developments to be included in the cumulative effects assessment (CEA) was informed by feedback from SMBC and information on their planning portal. Please can the Applicant indicate the level of agreement with SMBC on the developments to be included in the CEA?**
		Answer: Following initial contact with Solihull Metropolitan Borough Council (SMBC), an email containing the cumulative assessment search criteria and the long list of other developments was issued to SMBC's Planning Officer on 26/03/2018 for verification. The email requested confirmation of the construction programmes for the developments within the long list. The email also requested advice on any developments which were not already included in the long list which may need to be considered in the cumulative effects assessment. SMBC responded on 27/03/18 and provided comments about the developments included in the long list. No other developments were suggested by SMBC for inclusion into the long list. Subsequent to this dialogue, SMBC's online planning portal was regularly checked during preparation of the cumulative effects assessment to establish whether any new developments had come forward that met the inclusion criteria. Any such developments were then added to the long list. Please see response to question 1.10.1.
1.10.4	Applicant	**Question:** **Mitigation and monitoring**

		It is stated within the ES in Chapter 16, paragraphs 16.4.3 and 16.6.2 that no additional mitigation is considered appropriate to reduce the identified significant in-combination and cumulative effects. Please can the Applicant indicate whether this conclusion has been agreed with any key consultees and what additional mitigation measures have been considered beyond embedded and standard mitigation (presented in the OEMP and each technical chapter), with explanation as to why these have been discounted.
		Answer: The Applicant would like to clarify the statement made within the ES **[APP-061/Volume 6.1]** which has been replicated to some degree within the written question 1.10.4. A key consideration in relation to mitigation measures is proportionality, particularly those identified for temporary construction related impacts, where standard best practice and guidance will be applied to reduce impacts of this nature as far as practicable (proportionality is referred to explicitly in paragraph 16.6.2 and should also have been mentioned in paragraph 16.4.3). Mitigation has to be achievable, realistic and able to be implemented within the working constraints as explained throughout the ES for a Scheme of this nature in this location. The Applicant has provided the following table and text to provide the information requested by the ExA. For cumulative construction and operational related effects, the Applicant is committed to working with external projects to reduce as far as practicable the circumstances where component parts have the potential to generate significant cumulative effects. However, the Applicant cannot influence the desire nor compel third party developers to a mutual commitment. The effects as identified within Chapter 16: Assessment of Cumulative Effects within the ES **[APP-061/Volume 6.1]** are heavily weighted towards cumulative landscape effects, where the Applicant has worked to reduce the effects of the Scheme within the constraints of airport safeguarding. However, these constraints prevent the Applicant from eliminating such effects, as such, some effects remain. The emphasis would therefore be on the third party to reduce its effect further (if possible) to mitigate the cumulative effects identified.

As such, no additional measures have been considered by the Applicant for the reasons as set out above.

The table below provides the additional mitigation measures that have been considered in undertaking the in-combination construction and operation assessment with an explanation as to why these measures have been discounted. (To assist the ExA, the table is an extract from Chapter 16: Assessment of Cumulative Effects – with the additional information populated within the rose-tinted column).

Table: Summary of potential combined construction impacts and effects upon single environmental receptors

Receptor	Value	Potential in-combination impact	Duration	Scale	Mitigation	Additional Measures not considered Appropriate or Proportionate	Combined effect
Bickenhill North - residential properties	Medium	*Visual* (large adverse) *Noise* (some non-significant exceedances of construction noise limits predicted)	Temporary	Local	None considered practical above the measures outlined within the OEMP	N/A due to insignificant combined effect.	Slight adverse
St Peters Lane,	High	*Visual* (large	Temporary	Local	None considered	Temporary Planting from sapling: It would take longer	Moderate adverse

		Bickenhill conservation area - residential properties		adverse) *Noise* (short term significant effects due to construction noise) *Cultural Heritage* (moderate adverse) *Vibration* (exceedance of construction vibration limits predicted at some receptors)			practical above the measures outlined within the OEMP.	than the construction period to achieve its intended function **Not considered appropriate due to duration required.** Planting of established (instant) Temporary Planting: The safeguarding zone would be compromised with the addition of planting of this nature. **Not considered appropriate on safety grounds for a temporary impact.**		
		Users of Public Right of Way (M109) west of	High	*Visual* (large adverse) *Noise* (short term	Temporary	Local	None considered practical above the measures outlined	The users of the Public Right of Way are transient receptors and would expect to be subject to a very temporary significant effect. As such, professional opinion	Moderate adverse	

			Bickenhill - recreation		significant effects due to construction noise) Non-Motorised Users (minor adverse)			within the OEMP	concluded that measures such as noise screening along the PRoW **were disproportionate and could further erode the amenity from the ProW**. In addition, measures to mitigate views by additional planting were considered inappropriate due to temporary nature of the impact and duration needed for planting to establish. **Not considered further on grounds of timescales.**	
			Users of Public Right of Way (M112) west of Bickenhill - recreation	High	*Visual* (large adverse) *Noise* (short term significant effects due to construction noise) Non-Motorised Users	Temporary	Local	None considered practical above the measures outlined within the OEMP	See above - same rationale applies.	Moderate adverse

					(negligible)					
			Warwickshire Gaelic Athletic Association (WGAA) - recreation	Moderate	*Visual* (large adverse) *Noise* (short term significant effects due to construction noise)	Temporary	Local	None considered practical above the measures outlined within the OEMP	Taking into the consideration the extent of the works during construction, the use of planting for temporary visual mitigation would **be disproportionate in extent and inappropriate in so far the time required to establish it for its intended purpose** to mitigate a temporary effect. Notwithstanding the above, the Applicant proposes that the construction contractor will explore opportunities to use temporary noise barriers with a sympathetic colouring or patterns to provide dual purpose in-combination mitigation for visual and noise effects at Four Winds.	Moderate adverse	
			Four Winds farm and nearby residential properties	Moderate	*Visual* (large adverse) *Noise* (short term significant	Temporary	Local	None considered practical above the measures outlined within the	Chapter 12 of the noise assessment indicates that temporary noise barriers are proposed at Four Winds during construction. With regards to the visual impact, the Scheme by virtue of	Moderate adverse	

					effects due to construction noise)			OEMP	its size during construction, the use of planting for temporary visual mitigation would **be disproportionate in extent and time required to establish** to mitigate a temporary effect. Notwithstanding the above, the Applicant proposes that the construction contractor will explore opportunities to use temporary noise barriers with a sympathetic colouring or patterns to provide dual purpose in-combination mitigation for visual and noise effects at Four Winds.		
			St Peters Lane/Garden Centre - residential properties	Moderate	*Visual* (large adverse) *Noise* (short term significant effects due to constructio	Temporary	Local	None considered practical above the measures outlined within the OEMP	Chapter 12 of the noise assessment indicates that temporary noise barriers are proposed at Rose Cottage on St Peters Lane during construction. With regards to the visual impact, the Scheme by virtue of its size during construction, the	Moderate adverse	

			n noise)				use of planting for temporary visual mitigation would **be disproportionate in extent and time required to establish** to mitigate a temporary effect. Notwithstanding the above, the Applicant proposes that the construction contractor will explore opportunities to use temporary noise barriers with a sympathetic colouring or patterns to provide dual purpose in-combination mitigation for visual and noise effects where St Peters Lane meets the existing Catherine-de-Barnes Lane.	

Table 16-3: Summary of potential combined operational impacts and effects upon environmental receptors

Receptor	Value	Potential in-combination impact	Duration	Scale	Mitigation	Additional Measures not considered Appropriate or Proportionate	Effect
St Peters Lane,	High	*Visual*	Permanent	Local	None considered	The Applicant has worked to achieve a balance between	Large

		Bickenhill conservation area - residential properties		(large adverse) *Noise* (minor adverse)			practical	mitigation planting for visual impacts and the overriding constraint to the Scheme of Birmingham Airports safeguarding zone, which has influenced the overall mitigation strategy for the Scheme as noted within the application documents. Additional measures that were considered for the areas of St Peters Lane and Bickenhill conservation area such as introduction of varying heights of planting for screening. However, the need to ensure airport safety by means of obstacle reduction and bird attractant habitat has resulted in height specific planting being removed from the mitigation design. **Not considered appropriate due to airport safety requirements.**	adverse
		Warwickshire Gaelic Athletic Association	Moderate	*Visual* (large adverse) *Noise*	Permanent	Local	None considered practical	The Applicant has worked to achieve a balance between mitigation planting for visual impacts and the overriding	Large adverse

		(WGAA)		(minor adverse)				constraint to the Scheme of Birmingham Airport's safeguarding zone, which has influenced the overall mitigation strategy for the Scheme as noted within the application documents. <u>The introduction of tall planting to provide screening.</u> These linear tall planting arrangements would provide suitable migrating routes for large birds across a critical part of the safeguarding zone. **These measures were not considered appropriate due to airport safety concerns.**	
Transport Assessment Report [APP-174]									
1.11	**The relationship to other projects and the robustness of the traffic modelling**								
1.11.1	The Applicant, SMBC and WCC	**Question:** **Do the 'low' and 'high' traffic development demand scenarios identified in 3.9.1e of the TA [APP-174] equate to scenarios 1 and 3 respectively in the M42 ECONOMIC GATEWAY MASTERPLAN? If not, how do they differ?**							

		Answer: The 'low' and 'high' scenarios do not equate to scenarios 1 and 3 of the M42 Economic Gateway Masterplan. The scenarios were conducted to inform the development of the Applicant's business case for the Scheme. As such the tests were conducted using the M42/J6 Local Area Model and TUBA (Transport User Benefits Appraisal) to produce benefit / cost ratios (BCR) of the 'low' and 'high' scenarios, in addition to a central 'core' scenario which was used for design. A sensitivity test was undertaken for a hypothetical 'low growth' scenario, which assumes traffic congestion in the wider area around Junction 6 would constrain and prevent any further growth in traffic. To reflect this scenario, it was assumed that there will be no growth in the traffic demand beyond 2026, the year in which the HS2 Birmingham Interchange railway station is programmed to open. Therefore, for the assessment the level of traffic demand for 2031 and 2038 would stay at the same level as for 2026. The purpose of the test was to see how low the BCR may go as a possible 'worst' case. 'The UK Central Hub - Growth and Infrastructure Plan – Issue 3, UK Central Solihull / Urban Growth Company, 9th January 2018' sets out a vision and plan for future land use development and transport infrastructure within Solihull, this supersedes the M42 Economic Gateway Masterplan, and it is therefore no longer possible directly to compare the Applicant's high and low demand scenarios with any of the scenarios set out in that Masterplan. Instead, while some of the early development phases of the Hub Framework Plan are included in the core traffic forecasts for M42 Junction 6, most of the mid and later phases are not included, as they do not currently have any planning status. However, through time it is possible that some of the mid and later phase developments may be progressed through the planning system, thereby increasing road traffic demands in the area. A 'high growth' scenario was therefore developed to reflect some of the potential increase in traffic that may arise and to assess how such an increase may impact on the scheme BCR. It is understood from discussion with SMBC that transport model runs have been undertaken using the Policy Responsive Integrated Strategy Model (PRISM) for the West Midlands to assess the impact of the

		framework plan and these runs have been undertaken for the full development only. It is also understood that no runs have yet been undertaken for the phasing of development and infrastructure. To produce a 'high growth' scenario, assumptions would therefore need to be made on how much land use development may occur prior to triggering additional transport infrastructure above and beyond the M42 Junction 6 Improvement Scheme. The Hub Framework Plan incorporates the following phases of development: Phase 1: 2018-22; Phase 2: 2023-27; Phase 3: 2028-32; and Phase 4: Beyond 2033. Phase 1 only assumes committed/planned infrastructure, whereas Phase 2 assumes the M42 Junction 6 Improvement Scheme, HS2 Enabling Works and several other schemes such as roads running parallel to the M42 between Junctions 5A and 6, and a new road link from the M42 Junction 6 Improvements Link Road to Damson Parkway near JLR's Solihull plant site. For the 'high' growth test, it was therefore assumed that all of Phase 1 development will proceed but only some of Phase 2 will proceed before requiring additional transport infrastructure above and beyond what is currently committed / programmed. As detailed transport modelling work has not yet been undertaken by SMBC to inform the phasing of development and infrastructure, a view needed to be taken as to how much of the Phase 2 development may take place prior to triggering additional infrastructure. For the purpose of producing the 'high' growth scenario, it was assumed that all of the Arden Cross and 20% of NEC Phase 2 development would occur. The following land use development is proposed for Phases 1 and 2: <u>Phase 1 2018-22</u>

		Birmingham Business Park - 14,100 square metres (sqm) gross floor area JLR - new Logistic Operations Centre NEC 1. Office - 4,600m sqm 2. Mixed-use (including Leisure Box) - 27,300 sqm 3. Hotel (H1) – approx. 7,900 sqm 4. Film Studios – approx. 6-8 hectares 5. Residential - 130 units (potential for up to 550 units) <u>Phase 2 2023-27</u> Arden Cross Site 1. Office - approx. 18,000 sqm 2. Light Industrial - approx. 17,000 sqm 3. Mixed-use - approx. 784 sqm NEC 1. Hotel - approx. 17,000 sqm 2. Office - approx. 56,000 sqm 3. Mixed-use - approx. 73,000 sqm 4. Industrial Use - 16,000 sqm 5. Residential - 420 units The Phase 1 developments for Birmingham Business Park and JLR are already included in the 'uncertainty

		log' that went into the PRISM runs, used to derive traffic growth forecasts. The Phase 1 NEC developments and all of Phase 2 were not included and would therefore need to be included in the 'high growth' scenario. The 'high' growth test therefore included the addition of the Phase 2 Arden Cross site and 20% of the Phase 2 NEC traffic.
1.11.2	The Applicant, SMBC and WCC	**Question:** **For Solihull, the job totals for each relevant LAM zone are stated to have been derived from the employment land uses in scenario 2 as set out in the M42 ECONOMIC GATEWAY MASTERPLAN [APP-174, 3.4.26). That Plan posits a total of about 32,000 new jobs in Solihull by 2040 under scenario 2 and, in reasonable agreement (given the differing time periods and methods), the relevant table in Annex A of the TA [APP-174] identifies a total of 28,221 new jobs by 2041. However, several of those jobs are classified only as 'reasonably foreseeable' or 'hypothetical' both of which 'should be excluded from the core scenario' but may figure in alternative scenarios. Excluding those jobs would result in only some 9,655 new jobs being provided in Solihull by 2041 from that 'core scenario'.** **Is the interpretation outlined above correct?**
		Answer: The Applicant can confirm the interpretation is correct, however to clarify, the resulting new jobs would be 9,675. The total numbers of jobs are controlled to the DfT's National Trip End Model (NTEM). The future year jobs shown in the Uncertainty Log (Annex A of the TA) are only for major developments and used to adjust the distribution of jobs to traffic model zones.
1.11.3	The Applicant,	**Question:** **How many additional jobs in Solihull are accommodated within the traffic modelling?**

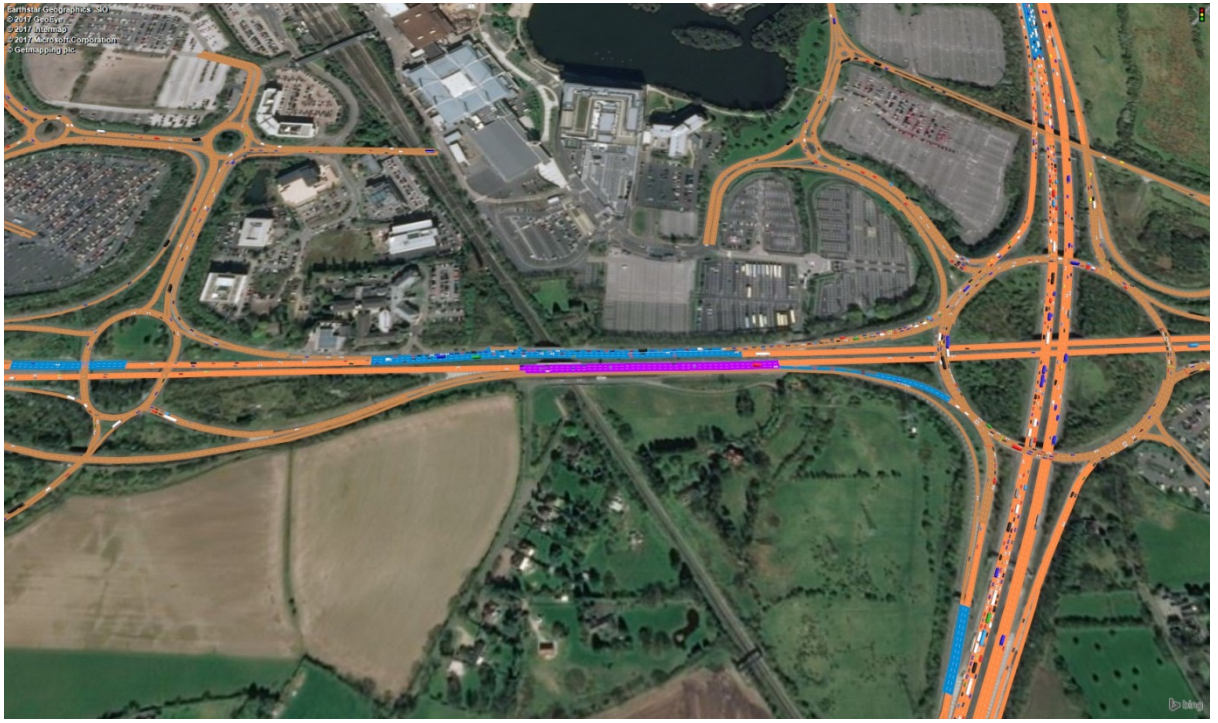
	SMBC and WCC	**Answer:** Future traffic growth in the M42 Junction 6 Local Area Model has been derived from the PRISM model which in turn is controlled to traffic growth derived from the DfT's National Trip End Model (NTEM). The PRISM forecasts are based on NTEM 6.2, which for Solihull has 111,876 jobs in 2016 and 129,942 jobs by 2041, which is an increase of 18,066 jobs, or +16%. The jobs in the Uncertainty Log (Annex A of the TA) have been used to refine the distribution of future year jobs to traffic model zones.
1.11.4	SMBC	**Question:** **What are the views of Solihull MBC in relation to Q1.11.2**
		Answer: N/A
1.11.5	The Applicant, SMBC, and Birmingham Airport	**Question:** **The external forecasts for growth at Birmingham Airport are calculated from DfT UK Aviation Forecasts, January 2013 Constrained Central Forecast, and CAA Passenger Survey Report, 2011 [APP-174, 3.3.1]. Those documents are now somewhat 'long in the tooth' and although they suggest some 12.2m and 17.3m passengers by 2021 and 2031 respectively, more recent forecasts (DfT UK Aviation Forecasts, 2017) indicate higher figures - 12m already (2016), 18m in 2030 and 27m in 2040, albeit that airport expansions elsewhere could reduce those numbers a bit.** **Is the traffic modelling based on a noticeable under-estimation of passengers at Birmingham Airport? And, if so, can adjustments be made to incorporate the most recent forecasts?**
		Answer: The Applicant has checked the assumptions which went into the PRISM run which informed development of the M42 Junction 6 Local Area Model forecasts and the modelling for the 2041 was based on 27.9 million

		passengers per annum (mppa). Within the DfT UK Aviation forecasts, January 2013, the constrained central forecast for the airport at 2040 is 28 mppa (Table 5.5). The updated DfT UK Aviation forecasts 2017 document shows the constrained central forecast for the airport at 2040 to be 27 mppa (Table 32). From interpolating the forecasts for the years between those reported for 2040 and 2050, the figure of 27 mppa would become 27.4 mppa by 2041. The traffic modelling for the design year is therefore not under-estimated and instead is slightly higher by around 0.5 mppa. The Applicant notes that the interim years will have some small differences.
1.11.6	Birmingham Airport	Question: What are the views of Birmingham Airport in relation to Q1.11.5? Do the latest UK Aviation Forecasts chime with the aspirations of Birmingham Airport?
		Answer: N/A
1.11.7	The Applicant, Arden Hotel, Applegreen PLC, Birmingham Airport, The Motorcycle Museum, Extra MSA Solihull	**Question:** **A feature of the traffic at Junction 6 on the M42 is its variability, both at peak times and over the year in response to exhibitions, events and holidays etc. Moreover, this variability appears to significantly affect congestion. In the TA this variability is addressed by the year of parking and traffic data obtained from the NEC and the resulting traffic flow on South Way for 2017 [APP-174, Figures 6.4-6.6]. However, the 2016 peak hour modelled flows of 782 AM and 762 PM [APP-174, Figure 6.2], reflect the average actually observed** **(600-800). It is therefore inevitable (not just possible) that flows higher than the modelled flows will occur quite frequently (and from the daily distribution, APP-174 Figure 6.4) on about 37% of days. The traffic modelling would thus appear to effectively ignore much of the variability identified, some of which is substantial. Is that a fair assessment? And, if not, why not?**

	Limited, Genting Solihull Limited, NEC Limited SMBC and WCC	**Answer:** The M42 Junction 6 Local Area Model (LAM) has AM peak hour inbound flows on South Way of 782 vehicles per hour which is in the 600-800 range as shown in Figure 6.5 **[APP–174/ Volume 7.2]**. The number of days with AM peak flows above the 600-800 range, shown in Figure 6.5, totals 66 days. The total number of days with AM peak data totals 197 days. It is therefore possible that flows may be higher than the modelled flows on 66 out of 197 days or by around 33.5% and therefore one third. This also means that the model reflects around 66.5% or two-thirds of weekdays. The PM peak model has outbound flows on South Way of 762 vehicles per hour which is in the 600-800 range as shown in Figure 6.6. The number of days with AM peak flows above the 600-800 range shown in Figure 6.6, total 53 days. The number of days with PM peak data totals 196 days. It is therefore possible that flows may be higher than the modelled flows on 53 out of 196 days or by around 27% and therefore around one quarter. This also means that the model reflects around 73% or around three-quarters of weekdays. The LAM has been developed according to the DfT's WebTAG guidance. It is usual practice to develop models and forecasts for average weekday conditions and this approach has been followed. There will, however, be occasions when traffic flows may be higher, but it is not usual practice to reflect these flows in the models, but to address them through sensitivity testing.
1.11.8	The Applicant, Arden Hotel, Applegreen PLC, Birmingham Airport, The Motorcycle	**Question:** **What are the effects of such variation on the operation of junction 6? Perhaps examine those effects at μ+σ and at the 85%ile of the observed daily and peak hour distributions [APP-174, Figures 6.4-6.6] with the aid of LinSig, if appropriate. If LinSig would not be appropriate, please explain why.**
		Answer: Higher flows for the NEC have already been modelled, presented and discussed with SMBC. Junction 6 has been modelled in VISSIM in both the existing and future year scenarios. Given the

	Museum, Extra MSA Solihull Limited, Genting Solihull Limited, NEC Limited SMBC and WCC	complexity of the gyratory in terms of its size, number of signalised junctions, lane markings and movements around the gyratory, the Applicant considered that Linsig would not be able to fully represent the existing and future operational characteristics. VISSIM is typically used for modelling such complex gyratories in preference to Linsig. The 2016 base year M42 Junction 6 Operational Model (OM) in VISSIM has slightly different flows from the M42 Junction 6 LAM (VISUM) due largely to the different sizes of models and level of detail. The LAM was calibrated and validated across screenlines and cordons for the modelled area which covers the Birmingham Motorway Box and Coventry. The OM was calibrated and validated against turning flows at Junction 6 and at other junctions in the immediate surrounding areas. For South Way, the OM has higher flows than the LAM. The inbound flow in the AM peak hour is 930 vehicles per hour, which is slightly above the 85th percentile flow, and an outbound flow in the PM peak hour is 1,170 vehicles per hour, which is above the 85th percentile flow. The μ+σ for AM morning peak inbound is 1,027 and for the PM evening peak is 1,141. The base year OM was demonstrated / run in real time and discussed with SMBC at several meetings (in November 2017 and in January, March and April 2018), over the course of which SMBC subsequently agreed that the model provided a reasonable representation of existing conditions. The model was also presented again to SMBC and to the Applicant's Emergency Planning Officer for the Midlands Region in December 2018. Screenshots of the OM at Junction 6 are shown below for the AM and PM peak hours.

2016 AM Peak Hour – 3rd Quarter (see Figure 1a in Appendix B)

		2016 PM Peak Hour – 3rd Quarter (see Figure 1b in Appendix B) 
1.11.9	The Applicant, Arden	**Question:** **How do those higher volumes of traffic leaving the NEC via South Way compare with the annual and peak hour distributions of traffic recorded in the TA [APP-174, Figures 6.4-6.6]?**

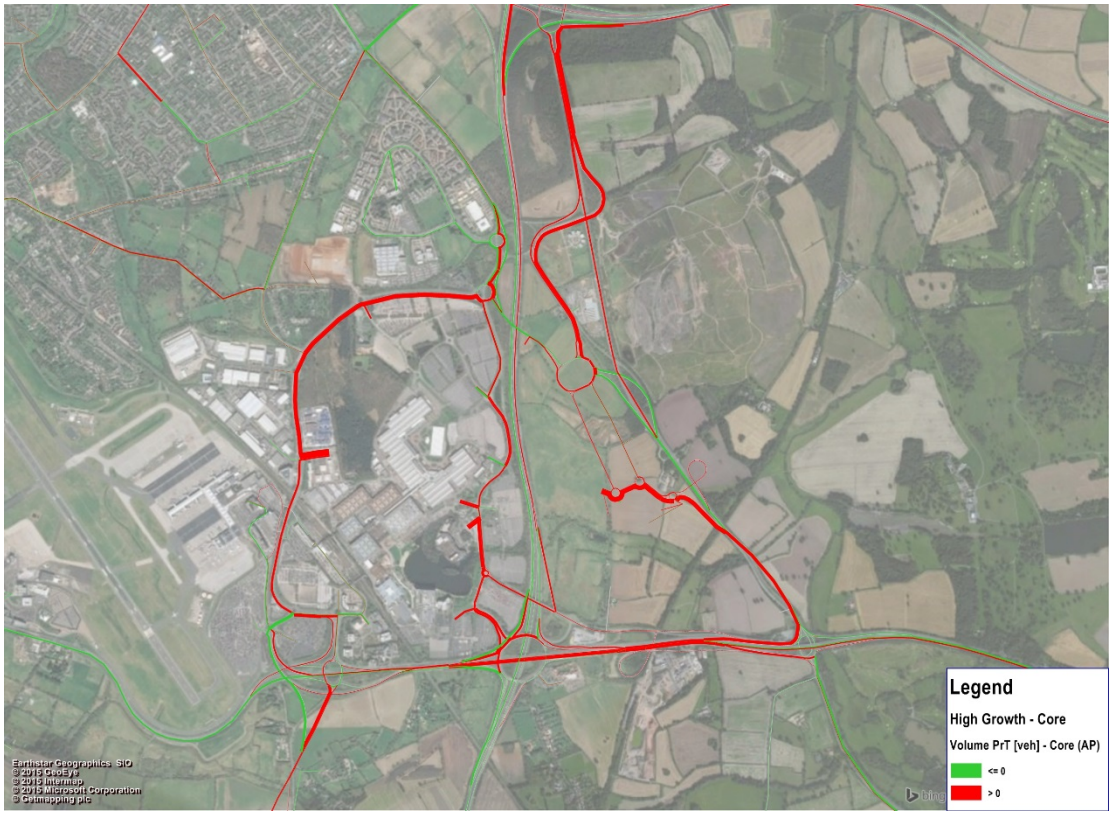
	Hotel, Applegreen PLC, Birmingham Airport, The Motorcycle Museum, Extra MSA Solihull Limited, Genting Solihull Limited, NEC Limited SMBC and WCC	
		Answer: The inbound flow in the AM peak hour (as calculated by the OM) is 930 vehicles per hour and the outbound flow in the PM peak hour is 1,170 vehicles per hour. The 85th percentile flows on South Way are 900 inbound in the AM peak hour and 850 outbound in the PM peak hour.
1.11.10	The Applicant, Arden Hotel, Applegreen PLC, Birmingham Airport, The Motorcycle Museum, Extra MSA	**Question:** **What is the effect of including weekends, school holidays and Bank Holidays on those distributions of traffic leaving the NEC [APP-174, Figures 6.4-6.6]?**
		Answer: All of the traffic modelling has been undertaken for weekdays as is standard practice according to the DfT's WebTAG guidance on modelling and scheme appraisal. As such the models represent average weekday traffic in the morning (08:00 to 09:00), interpeak (average

	Solihull Limited, Genting Solihull Limited, NEC Limited SMBC and WCC	hour between 09:30-15:30) and evening (17:00-18:00) peak hours. The Applicant therefore has not analysed NEC data for days other than weekdays. Compared with weekdays, overall traffic volumes are typically lower at weekends, school holiday and Bank Holidays. It is, however, possible that NEC traffic may be higher at weekends, school holiday and Bank Holidays for certain events. However, even on weekdays, the NEC's contribution to total traffic is relatively limited as shown in TAR Figure 7.1. From the TAR Figure 7.1 the traffic volumes show that the NEC's contribution to total traffic is as follows:

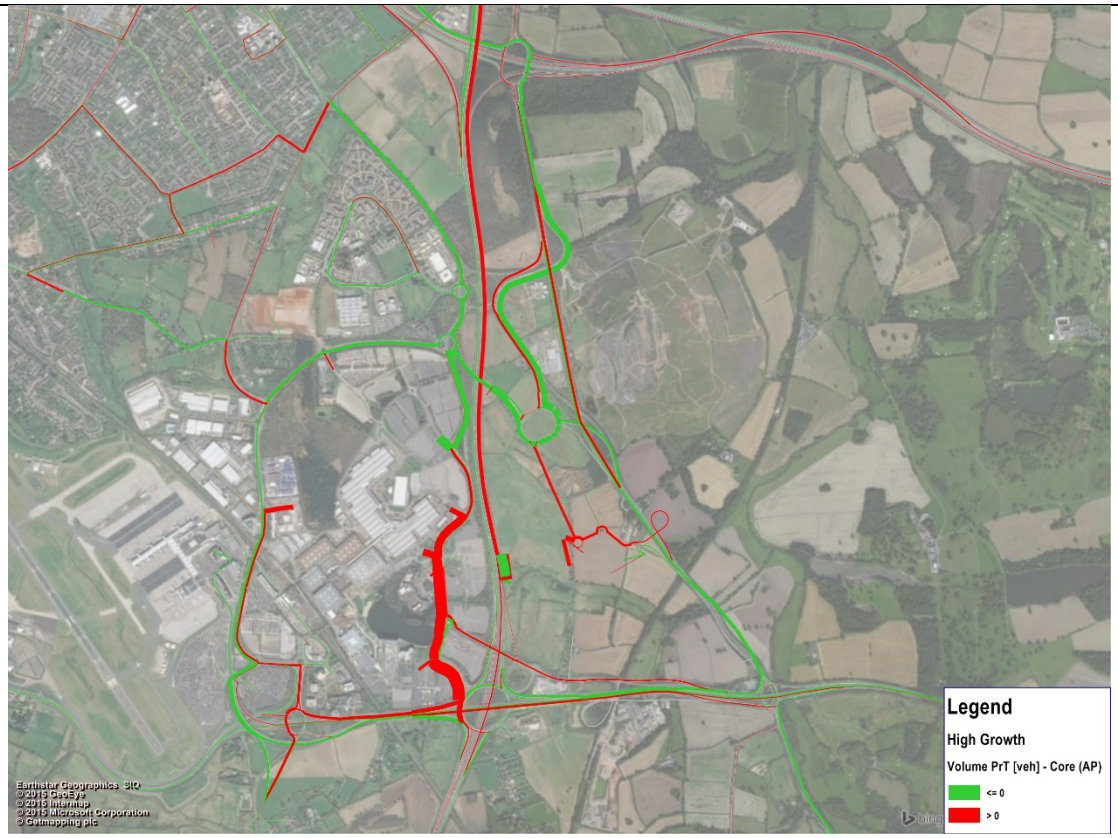
Year	Vehicles Per Hour Using M42 Junction 6					
	AM		Interpeak		PM	
	NEC	Total	NEC	Total	NEC	Total
2016	967 (17%)	5,817	785 (19%)	4,136	939 (17%)	5,482
2021	1,615 (24%)	6,632	969 (17%)	5,848	1,057 (16%)	6,755
2041	2,315 (31%)	7,448	1,432 (23%)	6,309	1,606 (20%)	8,134

		During weekdays, the proportion of NEC to total traffic is currently between 17% and 19% and is forecast to become in future between 16% and 31%, depending on the peak hour. Therefore while the NEC is an important contributor to traffic demand at Junction 6, its contribution is still small relative to the total volume of traffic using the junction. Even if there is additional NEC traffic outside weekdays, it is unlikely to exceed the reduction in non-NEC traffic using the junction. The Applicant does not, therefore, consider it necessary to carry out the exercise of surveying NEC traffic data outside weekdays as the main concerns and highest traffic volumes at Junction 6 are during the weekday morning and evening peak hours.
1.11.11	The Applicant, NEC Limited, SMBC and WCC	**Question:** **What are the effects on the operation of the Clock Interchange and junction 6 of the higher traffic levels addressed in the sensitivity testing and relating to? APP-174, 3.9 b. NEC – the traffic demand tests for potential higher traffic volumes accessing or egressing the site, and** **APP-174, 3.9 e. the 'low and 'high' traffic development demand scenarios for the UK Central development proposals?** **Please illustrate those effects with LinSig analyses and, if appropriate, by a suitable 'screenshot'. For junction 6 a comparable table to Table 7.7 [APP- 174] might also be useful.**
		Answer: The results of the higher traffic levels addressed in the sensitivity testing are shown in the figures and the tables below.

2041 AM Flow Differences - (High Growth – Core) (see Figure 2a in Appendix B)



2041 PM Flow Differences - (High Growth – Core) (see Figure 2b in Appendix B)



The appended figures show that the additional development in the NEC and Arden Cross site has introduced additional pressure at Junction 6 and the surrounding road network.

The equivalent tables to Table 7.7 with the High Growth compared with the core forecasts are shown below.

2041 AM Flow Differences at Junction 6 – (High Growth – Core)

Approach Arm From	Scenario		Difference	
	Core	High Growth	Number	%
2041 AM peak hour:				
A45 West	1,120	1,233	113	10%
NEC	139	221	82	59%
M42 North	1,909	1,843	-66	-3%
A45 East	1,491	1,486	-5	05
NMM/NCC	23	23	0	0%
M42 South	1,444	1,429	-15	-1%
Total	**6,126**	**6,235**	**109**	**2%**
2041 PM peak hour:				
A45 West	1,355	1,617	262	19%

NEC	880	810	-70	-85
M42 North	1,620	1,648	28	2%
A45 East	1,480	1,441	-39	-3%
NMM/NCC	96	96	0	0%
M42 South	592	660	68	11%
Total	**6,023**	**6,272,**	**249**	**4%**

2041 AM Flow Differences at Clock Interchange – (High Growth – Core)

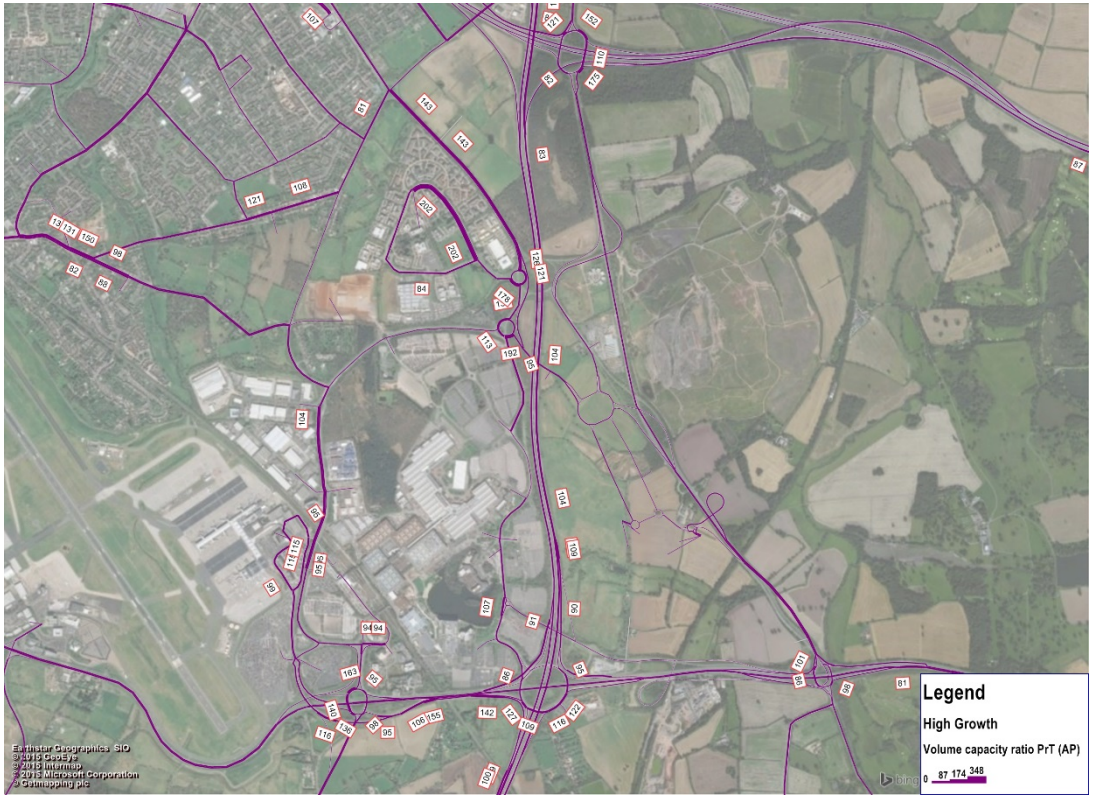
Approach Arm	Scenario		Difference	
From	Core	High Growth	Number	%
2041 AM peak hour:				
A45 West	548	538	-10	-2%
Bickenhill Lane North	1560	1,542	-18	-1%
A45 East	1,236	1,235	-1	0%

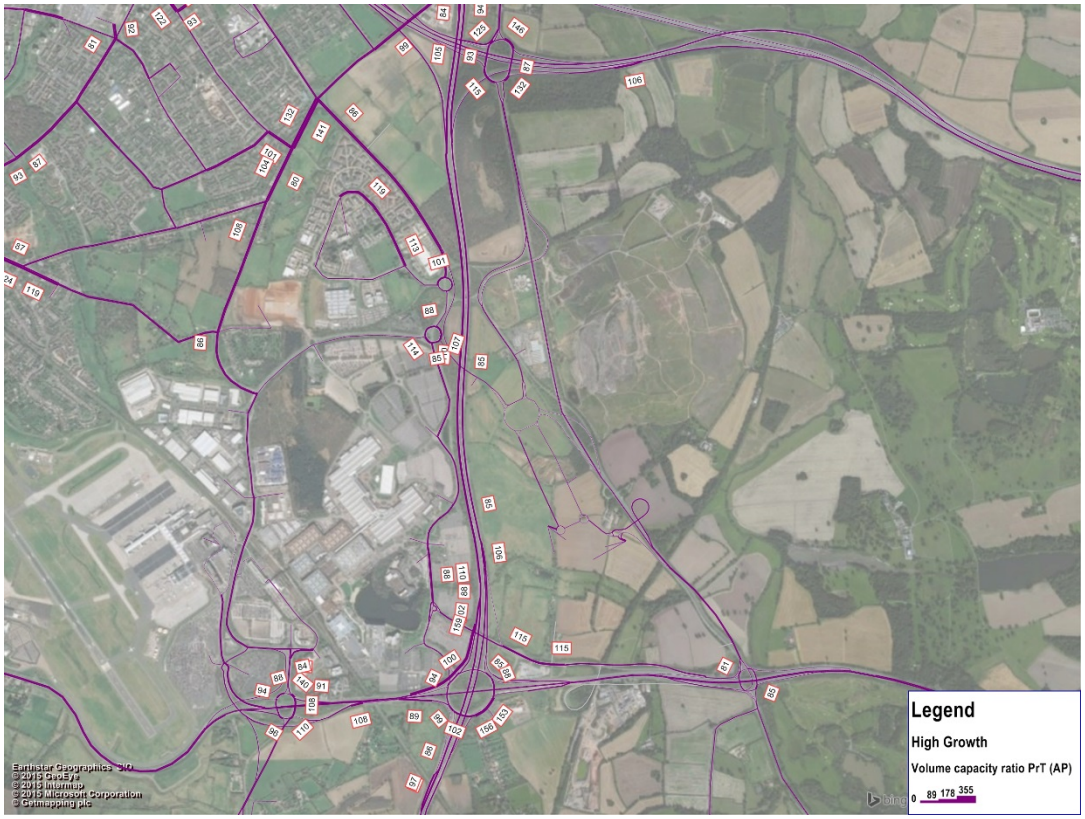
		Catherine-de-Barnes Lane / New Link Road	2,893	3,028	135	5%
		Total	**6,237**	**6,343**	**106**	**2%**
		2041 PM peak hour:				
		A45 West	318	365	47	15%
		Bickenhill Lane North	3,353	3,402	49	1%
		A45 East	692	697	5	1%
		Catherine-de-Barnes Lane / New Link Road	1,457	1,612	155	11%
		Total	**5,820**	**6,076**	**256**	**4%**

The additional traffic will impact on the performance of the scheme and accordingly will restrict the benefits for road users.

The Volume to Capacity Ratios (V/C) ratios at Junction 6 (please see figures below) and the roads in its vicinity show that many of the road links are forecast to experience V/C ratios greater than 100%, which will therefore restrict any increase in user benefits when compared with the core scenario.

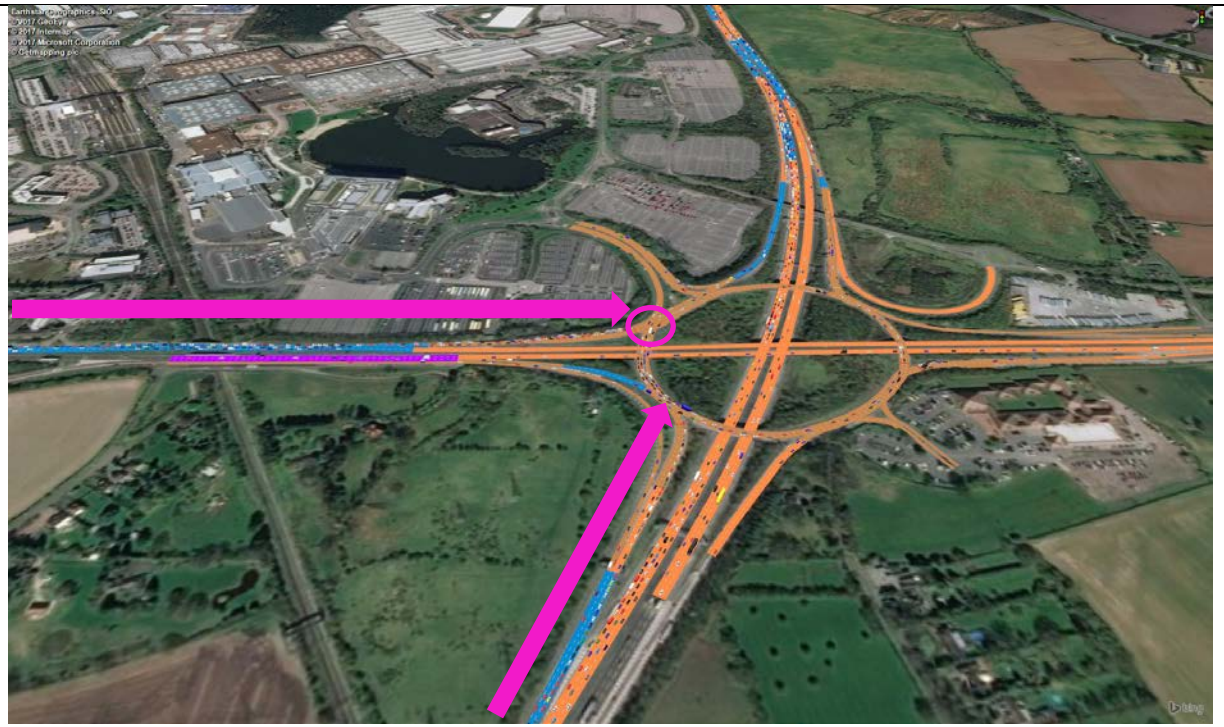
2041 AM Peak V/C Ratios (High Growth) (see Figure 3a in Appendix B)



		2041 PM Peak V/C Ratios (High Growth) (see Figure 3b in Appendix B) 
1.11.12	Arden Hotel, Applegreen	**Question:** **What are the views of the Local Authorities and the operating businesses mainly served by the Clock Interchange and junction 6 on the approach to the likely variations in traffic flows in the TA [APP-**

	PLC, Birmingham Airport, The Motorcycle Museum, Extra MSA Solihull Limited, Genting Solihull Limited, NEC Limited SMBC and WCC	**174]?**
		Answer: N/A
1.11.13	**The effectiveness of the scheme**	
1.11.14	Applicant	**Question:** **The overall traffic demand and the growth in traffic within the LAM matrices are shown in TA Tables 7.1 to 7.6 [APP-174] for the peak and average 'interpeak' hours. The 'do-minimum' and 'do-something' matrices are, in all cases, virtually identical, each accommodating an overall 32-34% growth in demand by 2041.** **Does that mean that the road network can accommodate the same volume of traffic whether or not the M42j6 scheme is implemented?**
		Answer:

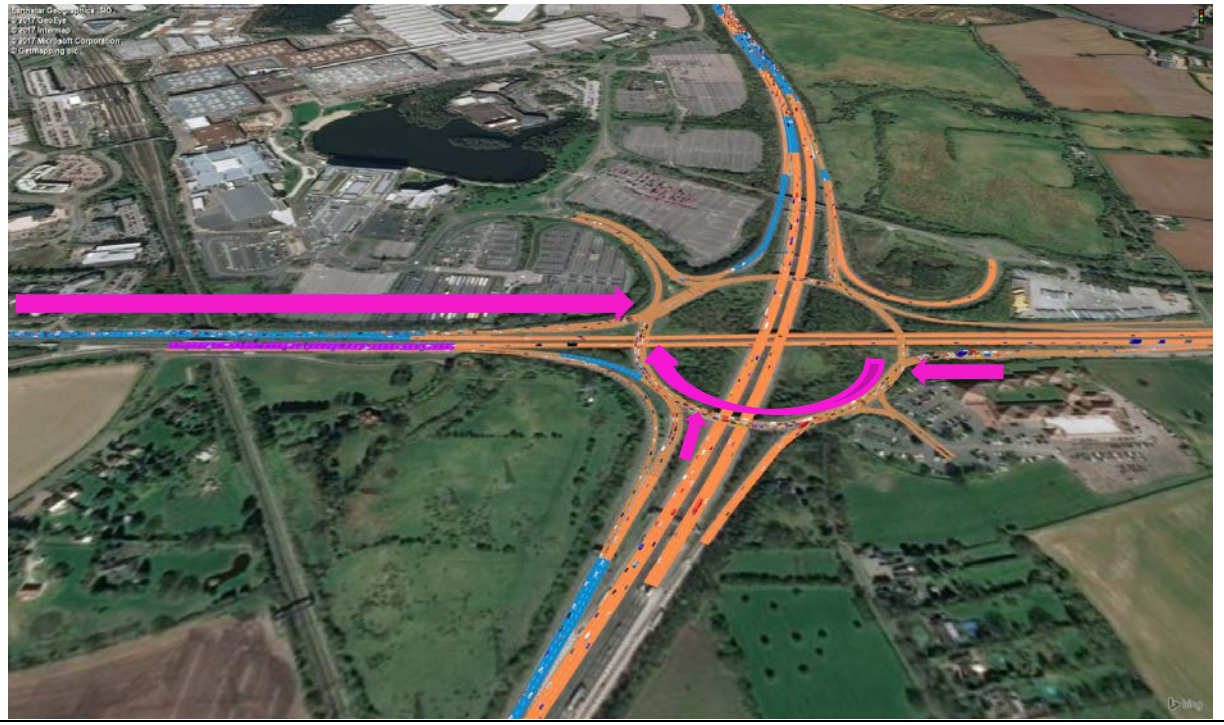
		The tables show the growth in total traffic across the whole of the LAM model which covers the Birmingham motorway box and Coventry, as shown in the TA Figure 3.2 **[APP-174/ Volume 7.2]**. The TA Para 7.3.2 states '*The demand forecast tables show the growth in the 'DM' matrices and in the 'DS' matrices with the M42 Junction 6 improvement scheme included. It should be noted that the growth in the 'DM' matrices without the M42 Junction 6 improvements scheme is almost identical to the 'DS' matrices and it can be concluded that the Scheme generates a minimal variable demand response within PRISM.'* The TA Para 7.3.3 goes on to state '*The above growth in traffic is across the whole of the LAM modelled area. There will therefore be some variations within sub-areas and along individual road links.*' This means that while the Scheme will have benefits for users of M42 Junction 6, it is not forecast to generate any additional demand for travel across the modelled area as a whole, i.e. the Birmingham motorway box and Coventry. Within the LAM area, there is forecast to be more-or-less that same overall traffic demand both without and with the Scheme. The answer is, therefore, yes.
1.11.15	Applicant	**Question:** **If the answer to Q1.11.14 is 'yes', please identify the consequences, particularly regarding the occurrence of congestion and delay. Is it possible to reproduce Figure 6.3 in the TA [APP-174] for the 'do-minimum' scenario in 2041?**
		Answer: The answer to Q1.11.14 is 'yes'. The M42 Junction 6 Operational Model (VISSIM) has been run to demonstrate the 2041 'Do Minimum' PM peak scenario. The output is summarised below.



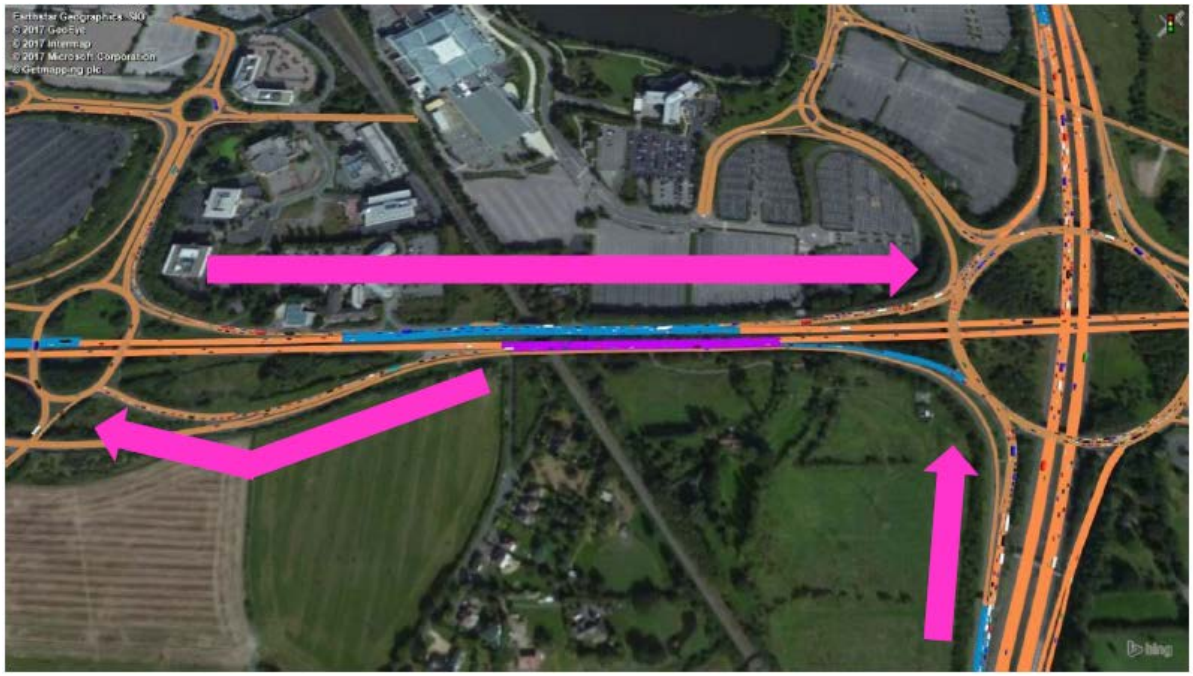
OM Do-Minimum scenario 2041 PM peak hour screenshot – with annotation (see Figure 4a in Appendix B)

The equivalent of Figure 6.3 has been reproduced for the Do-Minimum 2041 scenario with annotation to illustrate the forecast queues in the PM peak hour which are:

- A45 eastbound approach to J6 showing queues extending back from the gyratory along the A45 to Clock Interchange; and
- M42 northbound off-slip showing queues extending back from the gyratory along the off-slip to the

		motorway mainline. The A45 eastbound approach junction, which is highlighted by a circle, determines the queues on both the A45 eastbound off-slip and M1 northbound off-slip. The M42 Junction 6 Improvement scheme is therefore required to reduce the pressure on the said junction by removing some of the traffic demand from the junction. This is achieved by the introduction of the free-flow left turning lane connecting the A45 eastbound to M1 northbound movement and by the new link road connecting Clock Interchange to Junction 5A. The Do-Minimum 2041 scenario AM peak hour is shown below. 

		OM Do-Minimum scenario 2041 AM peak hour screenshot – with annotation (see Figure 4b in Appendix B) The Do-Minimum 2041 scenario in the AM peak hour is provided with annotation to demonstrate the forecast queues with description as follows: • A45 eastbound approach to J6 showing queues extending back from the gyratory along the A45 to Clock Interchange; • M42 northbound off-slip and A45 westbound off-slip indicates short queues; and • Southern half of the M42 J6 gyratory is showing queues extending back to the A45 westbound off-slip approach.
1.11.16	Applicant	**Question:** **The answer to Q1.11.14 is no, please explain how the matrices should be interpreted. Do the figures represent actual journeys or only a theoretical demand?**
		Answer: N/A
1.11.17	Applicant	**Question:** **At first glance the pattern of congestion shown in Figures 6.3 and 7.8 of the TA [APP-174] appear remarkably similar. Is it the case that the pattern of congestion at junction 6 remains similar before and after the implementation of the scheme, even though, presumably, the network will be accommodating traffic growth of 34%? How else can the Figures be interpreted?**
		Answer: No. The figures are different.

		Figure 6.3 has been reproduced below with annotation to demonstrate the existing queues in the PM peak hour which are: • At Junction 6 - A45 eastbound approach to J6 showing queues extending back from the gyratory along the A45 to Clock Interchange; • At Junction 6 - M42 northbound off-slip showing queues extending back from the gyratory along the off-slip to the motorway mainline; and • At Clock Interchange – A45 westbound showing queues extending back from the roundabout to the A45 westbound mainline. 

		Reproduced Figure 6.3: OM PM peak hour screenshot – with annotation (see Figure 5a in Appendix B) Figure 7.8 has also been reproduced below. No annotation has been added as the figure does not show any queuing at Junction 6.  **Reproduced Figure 7.8: 2041 PM peak hour at 17:30 (see Figure 5b in Appendix B)**
1.11.18	The Applicant,	**Question:** **The LinSig analysis for the Clock Interchange shows that the improved junction will operate within**

<table>
<tr><td></td><td>Arden Hotel, Applegreen PLC, Birmingham Airport, The Motorcycle Museum, Extra MSA Solihull Limited, Genting Solihull Limited, NEC Limited SMBC and WCC</td><td>capacity, but only just during the AM peak with a PRC of just 1% (Table 7.9 of the TA [APP-174]). What are the consequences for the analysis of the variations or additions in traffic flows that are likely to occur? Please provide a comparable LinSig analysis for the current situation.</td></tr>
<tr><td></td><td></td><td>Answer:

Should additional flows occur this may lead to queueing in the morning peak hour as the model is forecast to operate with only 1% practical reserve capacity in 2041. However, both the M42 Junction 6 Local Area Model and Operational Model are very sensitive to junction delays in this area. The operational capacity, queuing and delay at Clock Interchange and at the three roundabouts to the north of Clock Interchange at Airport Way and Bickenhill Lane are all very sensitive to traffic flows and routeing.

Clock Interchange is not signalised and currently operates as a roundabout. The results of running ARCADY (rather than Linsig which is for modelling signals) for the current situation are as follows:

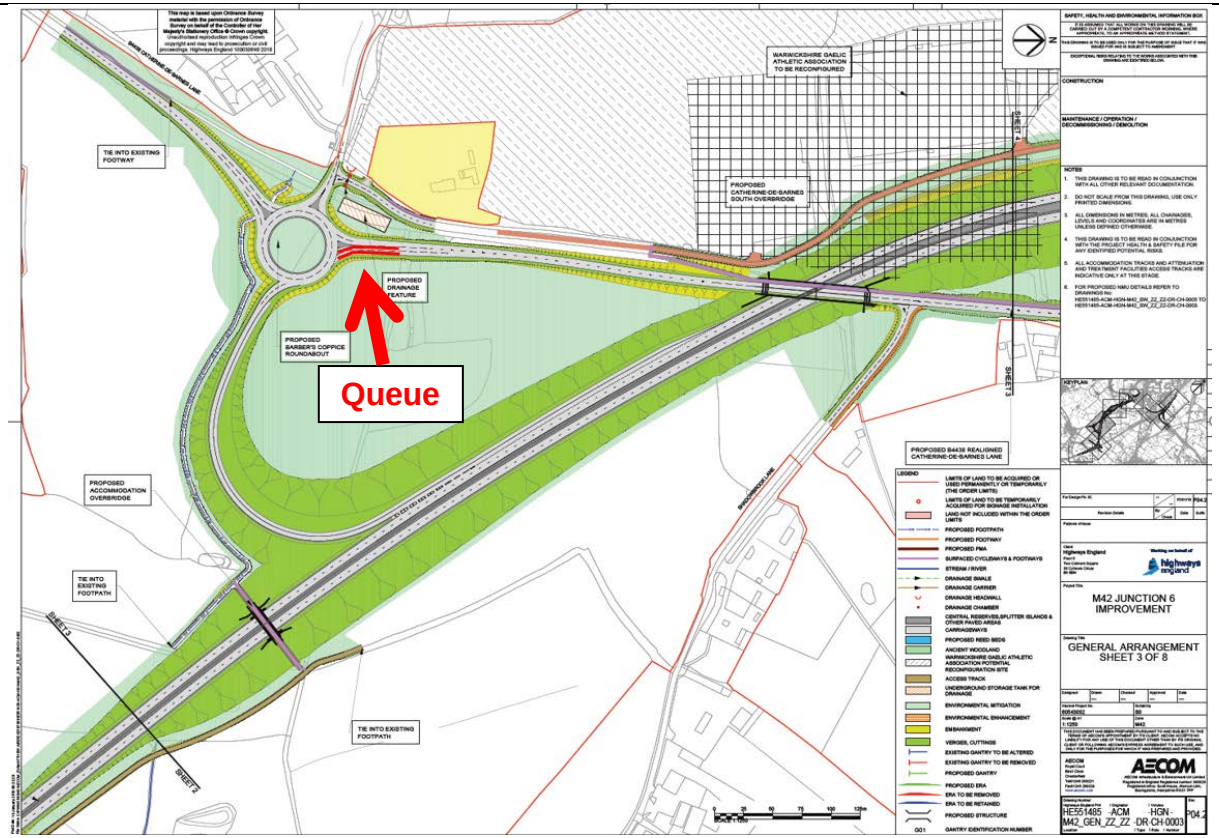
<table>
<tr><th rowspan="2">ARM</th><th colspan="3">AM</th><th colspan="3">PM</th></tr>
<tr><th>RFC</th><th>Queue</th><th>LOS</th><th>RFC</th><th>Queu</th><th>LOS</th></tr>
<tr><td>A45 off slip – West</td><td>0.31</td><td>0</td><td>A</td><td>0.14</td><td>0</td><td>A</td></tr>
<tr><td>Bickenhill Lane</td><td>0.33</td><td>1</td><td>A</td><td>0.71</td><td>2</td><td>A</td></tr>
<tr><td>A45 off-slip – East</td><td>0.61</td><td>2</td><td>A</td><td>0.44</td><td>1</td><td>A</td></tr>
<tr><td>New Link Road</td><td>0.60</td><td>2</td><td>A</td><td>0.45</td><td>1</td><td>A</td></tr>
</table>

The above results show the junction with its current layout in the 2016 base year would operate within its capacity. However, it is worth noting that during the PM peak hour, the Bickenhill Lane approach operates with a relatively high RFC of 0.71 which indicates there is limited spare capacity to accommodate future growth in traffic.

RFC means ratio of flow to capacity.

LOS means level of service. A = free flowing. Queue lengths given in vehicles.</td></tr>
<tr><td>1.11.</td><td>The</td><td>Question:</td></tr>
</table>

19	Applicant, SMBC and WCC	**The ARCADY output at TA table 7.11 [APP-174] demonstrates that the CdeB roundabout operates well above what is normally considered as a maximum operational capacity and with a mean maximum queue of 13 cars.** **Please explain what is happening here and indicate the traffic flows that are impeding entry onto the roundabout.**
		Answer: Table 7.11 relates to the roundabout between the new mainline link road and Catherine-de-Barnes Lane, which will be known as Barbers Coppice roundabout, not Catherine-de-Barnes roundabout. The flows impeding entry are those from Catherine-de-Barnes Lane heading north to access the new mainline Link Road northbound. This traffic has priority on the roundabout and so forms the 'cross flow' which impedes access from Catherine-de-Barnes Lane from the north.
1.11.20	The Applicant, SMBC, WCC, Birmingham Dogs Home, and Mr Phillip O'Reilly	**Question:** **Please indicate the length of the 13-car queue referred to in Q1.11.19 and modelled in TA table 7.11 [APP-174] on a plan.**
		Answer: The 13-car queue is forecast on the approach from the north which has two-lanes. This would result in around 7 cars queuing in each lane. With the length of a car assumed to be around 6 metres, the queue would extend to around 42 metres in both lanes, as highlighted in red in the figure below **(see Figure 6 in Appendix B)**.

		
1.11.21	Applicant	**Question:** **Please explain why a distinction is made in the TA [APP-174] between 'demand' (table 7.11) and 'actual' (table 7.12) flows in relation to this roundabout but (apparently) nowhere else.**

		Answer: The M42 Junction 6 LAM uses VISUM software which forecasts the assignment of traffic across a network. The software models both link and junction capacity. Where junctions experience traffic demand flows greater than capacity, the model shows queues. At each junction the model shows both 'demand' and 'actual' flows. 'Demand' flows represent all traffic across the modelled network travelling from its origin to its destination within the modelled period. However, queues can and do occur in the modelled period thereby restricting how much traffic can travel to downstream junctions. As a result of queuing, not all the forecast traffic will arrive at each junction. The traffic that does arrive is the 'actual' flow. Because the ARCADY results for this roundabout with 'demand' flows exceeded 0.85, the results with actual flows were also tested to confirm that the junction will work within capacity. This was not done for any other junction because all other junctions had forecasts below 0.85.
1.11.22	Applicant	**Question:** **What and where are the queues upstream of this roundabout that reduce the 'actual' flows into it and what is the size of that reduction from the 'demand' flows?**
		Answer: The upstream queues will be elsewhere in the modelled network and beyond the Scheme. For example, the LAM shows queues to the north at the two roundabouts north of Clock Interchange, to the west at the A45 / Damson Parkway junction and to the south on Hampton Lane and on the A41. At Barber's Coppice roundabout, the 'actual' flows are lower than the 'demand' flows in 2041 by -133 vehicles in the AM peak hour and by -143 vehicles in the PM peak hour.
1.11.23	Applicant	**Question:** **Can the operation of the signalised gyratory at junction 6 under existing conditions and as forecast under the proposed scheme in 2041 be assessed using LinSig? If so, what are the results and how**

		do they compare to the existing situation? If not, why not?
		Answer: Junction 6 has been modelled in VISSIM in both the existing and future year scenarios. Given the complexity of the gyratory in terms of its size, number of signalised junctions, lane markings and movements around the gyratory, it was decided that Linsig would not be able to fully represent the existing and future operational characteristics. VISSIM is typically used for modelling such complex gyratories in preference to Linsig.
1.11.24	The Applicant, SMBC, WCC, Bickenhill and Marston Green Parish Council, Mr Heath Cotterill, Ms Barbara Toucher	**Question:** **What is the increase in travel time from St Peter's Church, Bickenhill to the Birmingham Airport terminal comparing current conditions and the routes possible once the 'do-something' scenario has been implemented?**
		Answer: The travel time from St Peter's Church, Bickenhill to Birmingham Airport is currently around 6-8 minutes in the morning and evening peak hours. These estimates were taken from the Google Maps journey planner which gives a representative journey time for the typical existing conditions. In order to understand the difference in the journey time, a comparison was made between the 2016 base model and the 2041 with the Scheme model. The analysis indicates that the journey time with the Scheme would be longer by around 2 minutes for this journey. Therefore, the future journey time for this trip is forecast to be around 8-10 minutes.
Matters separate to ES		
1.12	**Draft DCO**	
1.12.		**Question:**

1		**Annex D to the Rule 6 Letter 23 April 2019 provided notice of an Issue Specific Hearing (ISH) on the dDCO which was held on 22 May 2019 (ISH1). Table 1 to Annex E to that letter set out a schedule of issues and questions for examination at ISH1 and at subsequent ISHs. The examination timetable provides that matters raised orally in response to that schedule are to be submitted in writing by Deadline 2: 24 June 2019. Comments on any matters set out in those submissions are to be provided by Deadline 3: 15 July 2019, which is the same as the deadline for responses to these questions. IPs who participated in ISH1 and consider that their issues have already been drawn to the ExA's attention do not need to reiterate their issues further. IPs are requested to review the Deadline 2 written submissions arising from ISH1 before responding to the questions in the schedule that still need to be addressed and are listed below. Matters set out in Deadline 2 written submissions arising from ISH1 are best responded to in Deadline 3 comments rather than in responses to the following listed questions, which aim to capture matters that were not raised at ISH1.** **Questions not specifically addressed at ISH1 and listed in Table 1 to Annex E of the Rule 6 letter:** **1.4, 1.5, 2.1, 2.2, 6, 7, 10, 11, 14, 16, 18-21, 27, 29-36**
		Answer: Please see the separate document **[Volume 8.7]** responding to the ExA's written questions on the dDCO which provides a full written response to the schedule of issues and questions raised for examination ISH1 and subsequent ISHs. The document also reflects issues and points raised and discussed during ISH1 on the dDCO held on 22 May 2019 in response to the issues and questions raise.
1.12.2	**Compulsory Acquisition**	
1.12.	Applicant	**Question:**

3		**The Applicant is requested to complete Annex A of the attached Compulsory Acquisition Objections Schedule.**
		Answer: Please see **Appendix C** to this document which contains the completed Annex A of the Compulsory Acquisition Objections table.

Appendix A

From: Nargas, Noreen <Noreen.Nargas1@environment-agency.gov.uk>
Sent on: Friday, August 3, 2018 7:22:02 AM
To: Mirza, Omar <Omar.Mirza@aecom.com>
Subject: M42 JUNCTION 6
Attachments: dps1.pdf (10.04 KB)

HI Omar,

Please find attached our comments.

Kind regards

Noreen

From: Robert Eaton <Robert.Eaton@birminghamairport.co.uk>
Sent on: Monday, July 30, 2018 12:35:16 PM
To: Mirza, Omar <Omar.Mirza@aecom.com>; Andrew Davies <Andrew.Davies@birminghamairport.co.uk>; Noreen.Nargas1@environment-agency.gov.uk; andrew.crawford@environment-agency.gov.uk; ebradford@solihull.gov.uk
CC: Pizzey, Jonathon <Jonathon.Pizzey@highwaysengland.co.uk>; Harris, Chris <Chris.Harris@highwaysengland.co.uk>; Farooq, Javaid <Javaid.Farooq@aecom.com>; Doolan, Ryan <Ryan.Doolan@aecom.com>; Bamforth, Ian <ian.bamforth@aecom.com>; Hemingway, James <james.hemingway@aecom.com>; Jones, Timothy <Timothy.Jones1@aecom.com>; Tucker, Owen <owen.tucker@aecom.com>; Andrew Davies <Andrew.Davies@birminghamairport.co.uk>
Subject: RE: M42 Junction 6 Improvement - Attenuation and Treatment Areas

Dear Omar

Thank you for sending the plans to us. Our comments, which relate only to the attenuation and treatment proposals in respect of bird strike, are set out below.

We can confirm that we have no objection to the proposals as set out in your plans. This is primarily because underground tanks have been utilised in the more sensitive locations and the balancing ponds have reed beds and netting to discourage birds being attracted to them. As discussed previously we would still require them to be managed post construction to ensure that they remain a deterrent in the future. We would also request that a bird strike mitigation plan relating to the construction period is also submitted with the DCO application. We would be happy to provide advice on this.

Regards

Rob

Robert Eaton
Head of Planning Transport and Strategy
Birmingham Airport
Tel: +44 (0)121 767 7032
Mob: +[redacted]
E-mail: Robert.Eaton@birminghamairport.co.uk

From: Mirza, Omar <Omar.Mirza@aecom.com>
Sent: 20 July 2018 10:39
To: Robert Eaton <Robert.Eaton@birminghamairport.co.uk>; Andrew Davies <Andrew.Davies@birminghamairport.co.uk>; Noreen.Nargas1@environment-agency.gov.uk; andrew.crawford@environment-agency.gov.uk; ebradford@solihull.gov.uk
Cc: Pizzey, Jonathon <Jonathon.Pizzey@highwaysengland.co.uk>; Harris, Chris <Chris.Harris@highwaysengland.co.uk>; Farooq, Javaid <Javaid.Farooq@aecom.com>; Doolan, Ryan <Ryan.Doolan@aecom.com>; Bamforth, Ian <ian.bamforth@aecom.com>; Hemingway, James <james.hemingway@aecom.com>; Jones, Timothy <Timothy.Jones1@aecom.com>; Tucker, Owen <owen.tucker@aecom.com>
Subject: M42 Junction 6 Improvement - Attenuation and Treatment Areas

Dear All,

Further to the meeting on 8th May 2018, please find attached a Technical Note (with associated sketches and appendices), drafted to clarify the attenuation and treatment proposals for our improvement scheme.

I would be grateful if you could please review the document and provide me with your acceptance of its contents.

Should you wish to discuss any of the above, please contact me.

Kind regards

Omar Mirza, BSc (Hons) IEng MIET
Senior Engineer, Strategic Highways, Scotland & Ireland
D +44-141-354-5607
omar.mirza@aecom.com

AECOM
Citypoint 2

Appendix B

Traffic Figures

Figure 1A – 2016 AM Peak Hour – 3rd Quarter

Figure 1B – 2016 PM Peak Hour – 3rd Quarter

Figure 2A – 2041 AM Flow Differences - (High Growth – Core)

Figure 2B – 2041 PM Flow Differences - (High Growth – Core)

Figure 3A – 2041 AM Peak V/C Ratios (High Growth)

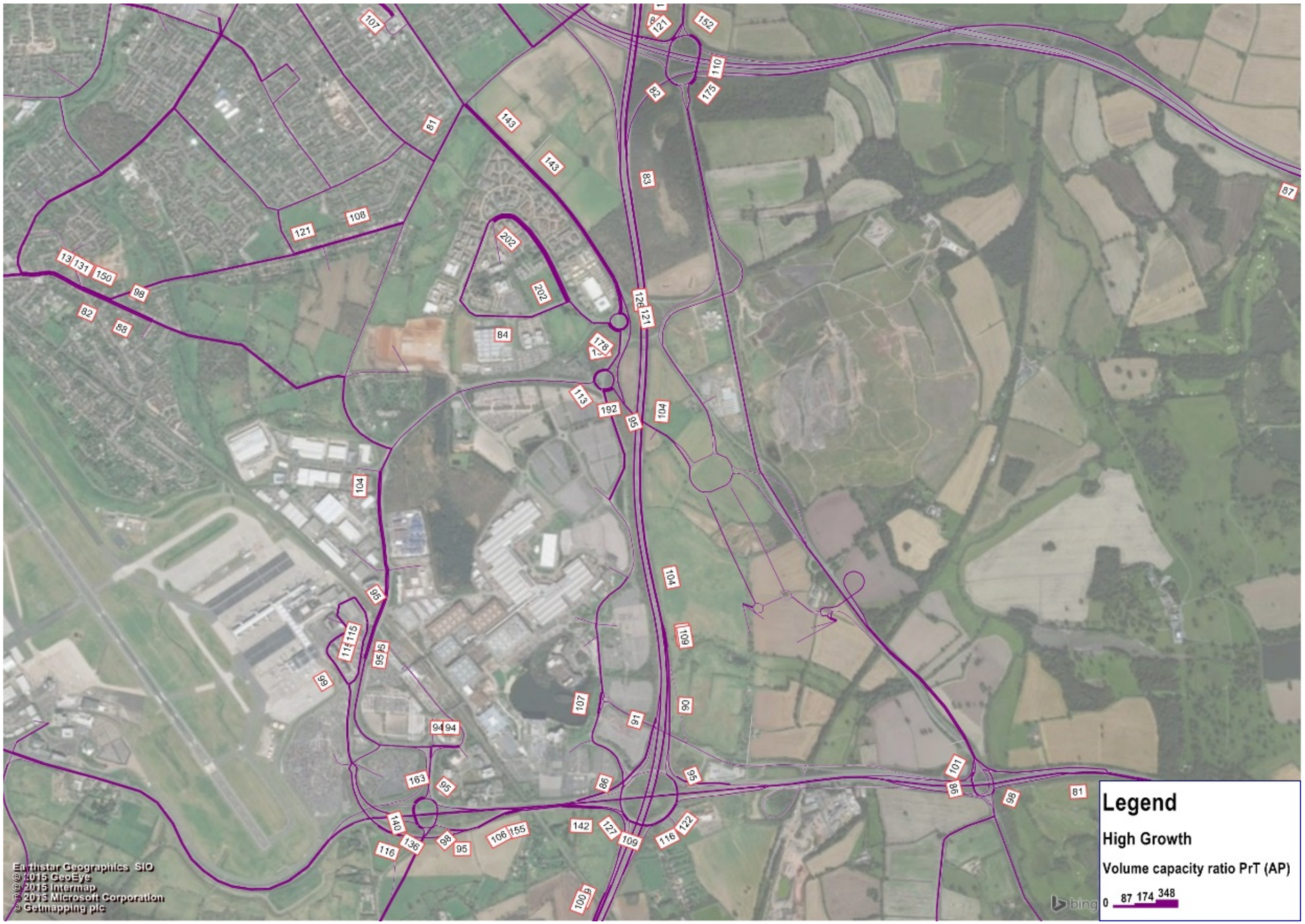


Figure 3B – 2041 PM Peak V/C Ratios (High Growth)

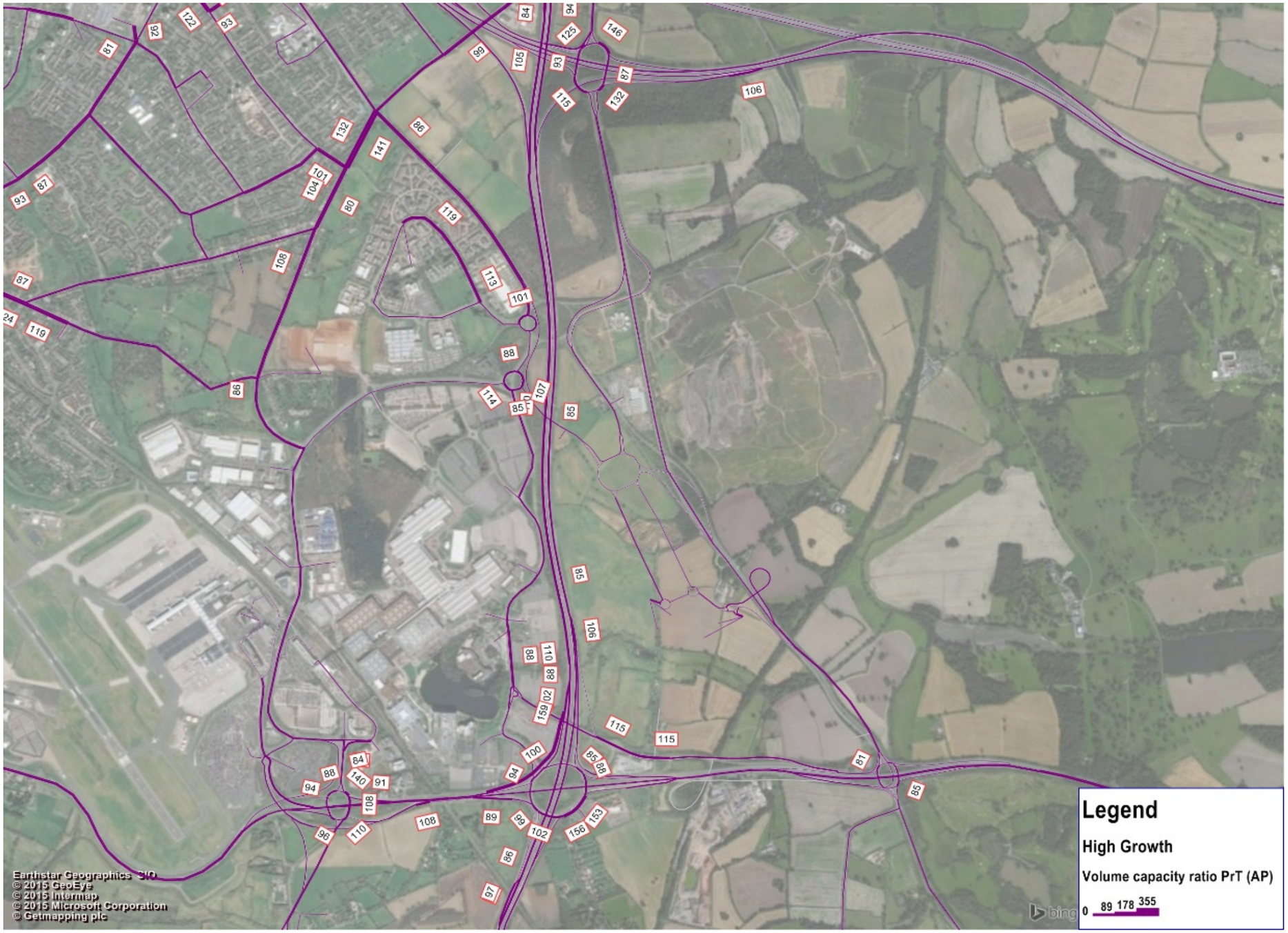


Figure 4A – OM Do-Minimum scenario 2041 PM peak hour screenshot – with annotation

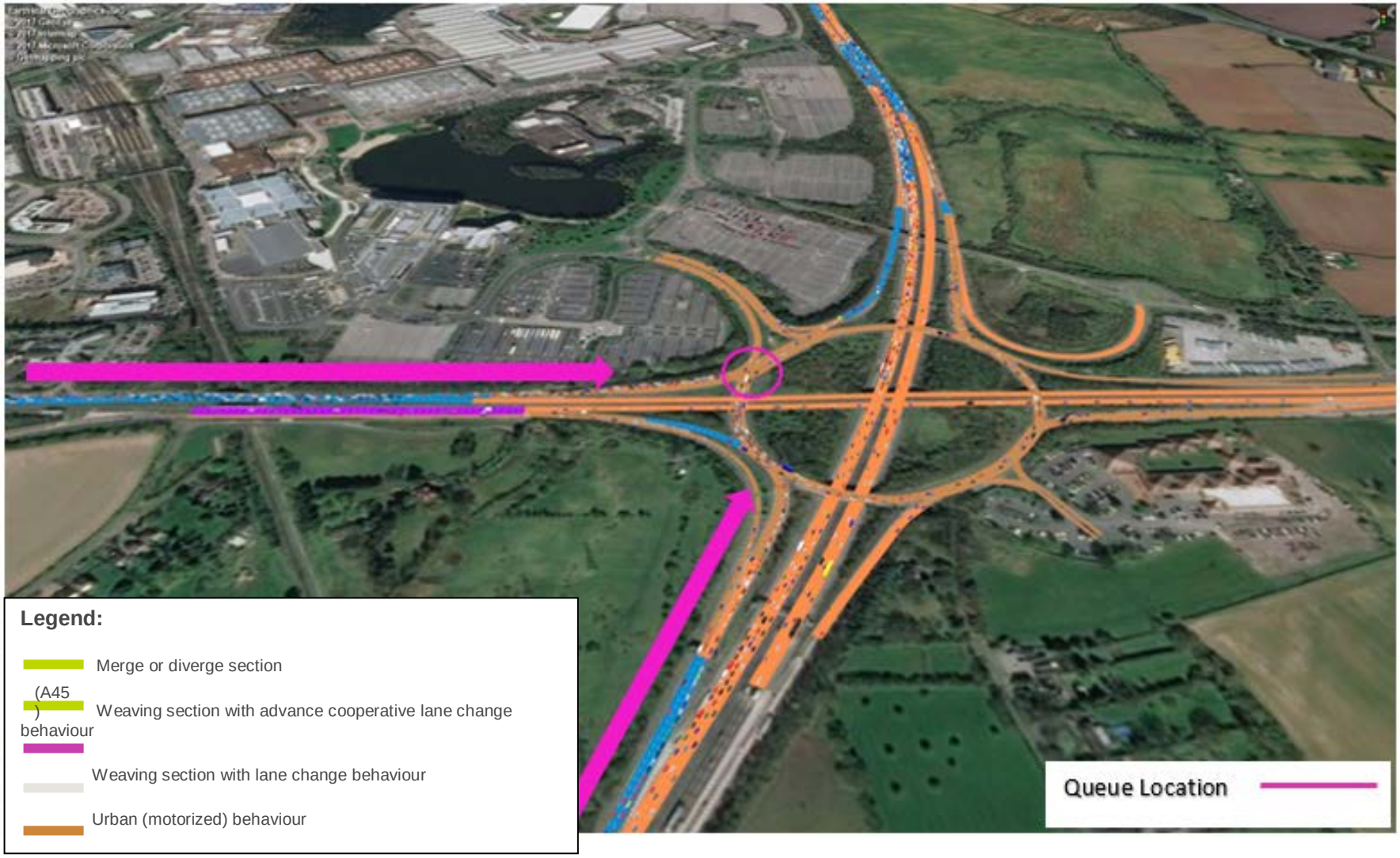


Figure 4B – OM Do-Minimum scenario 2041 AM peak hour screenshot – with annotation

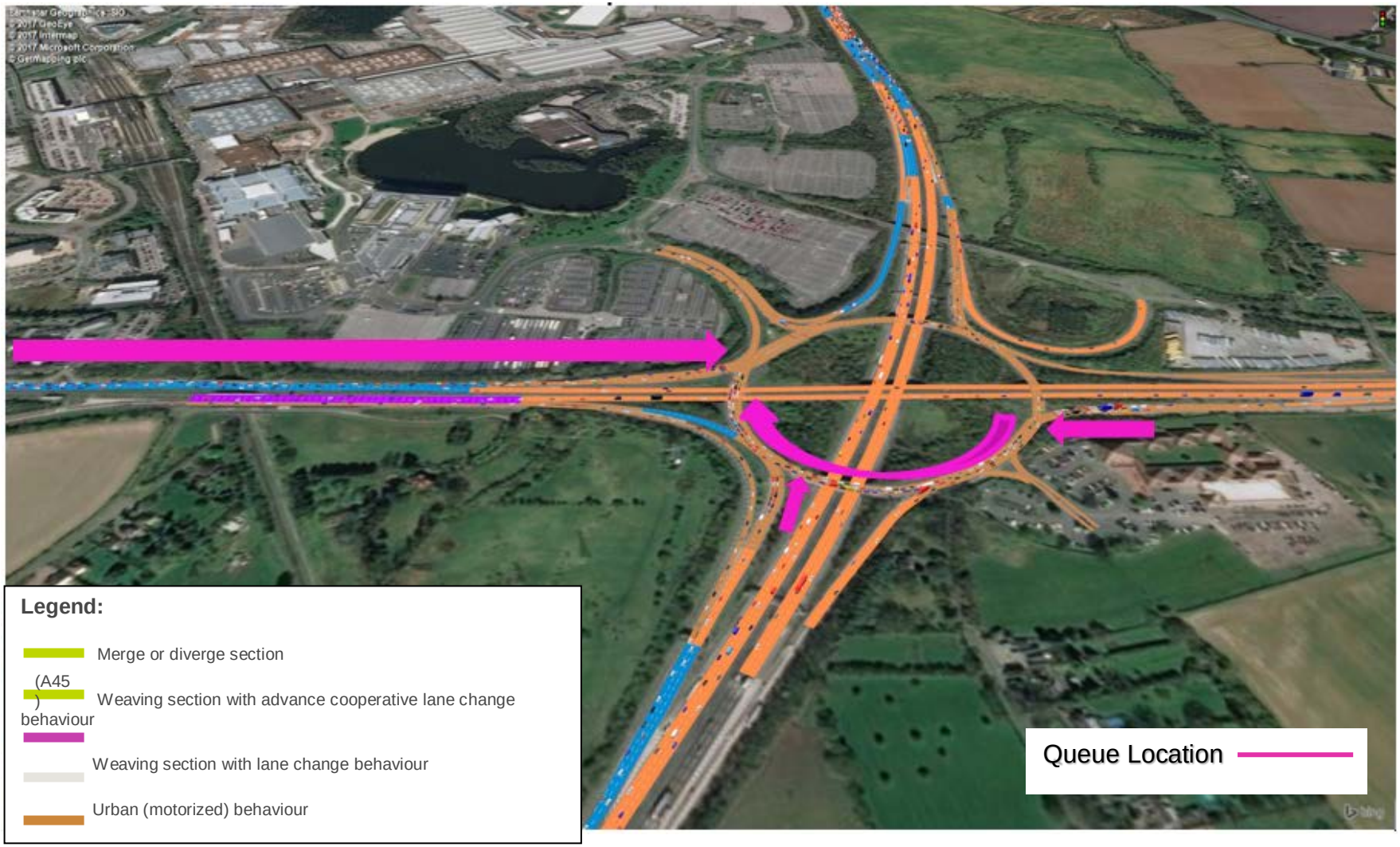


Figure 5A – Reproduced Figure 6.3: OM PM peak hour screenshot – with annotation

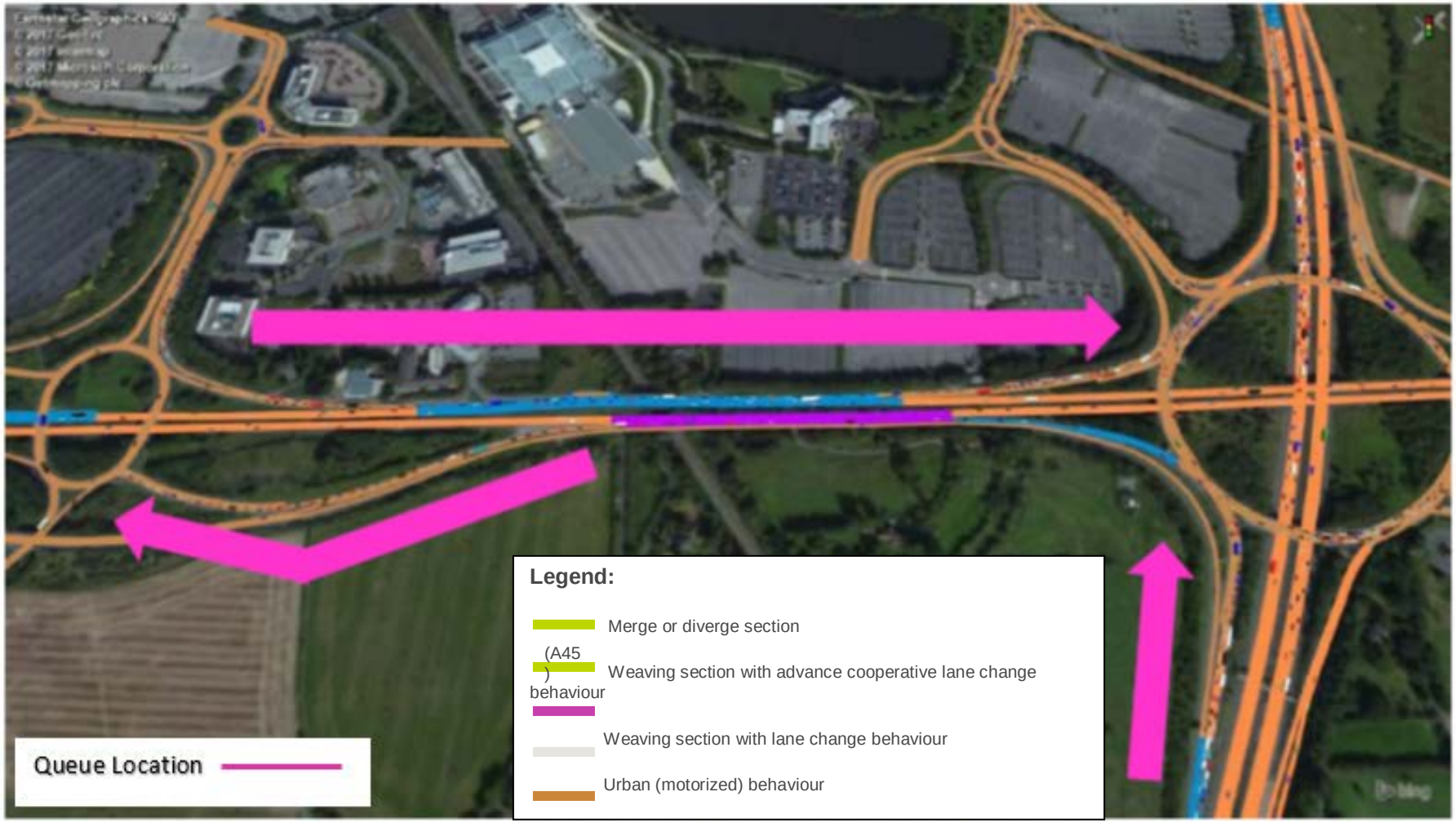


Figure 5B – Reproduced Figure 7.8: 2041 PM peak hour at 17:30

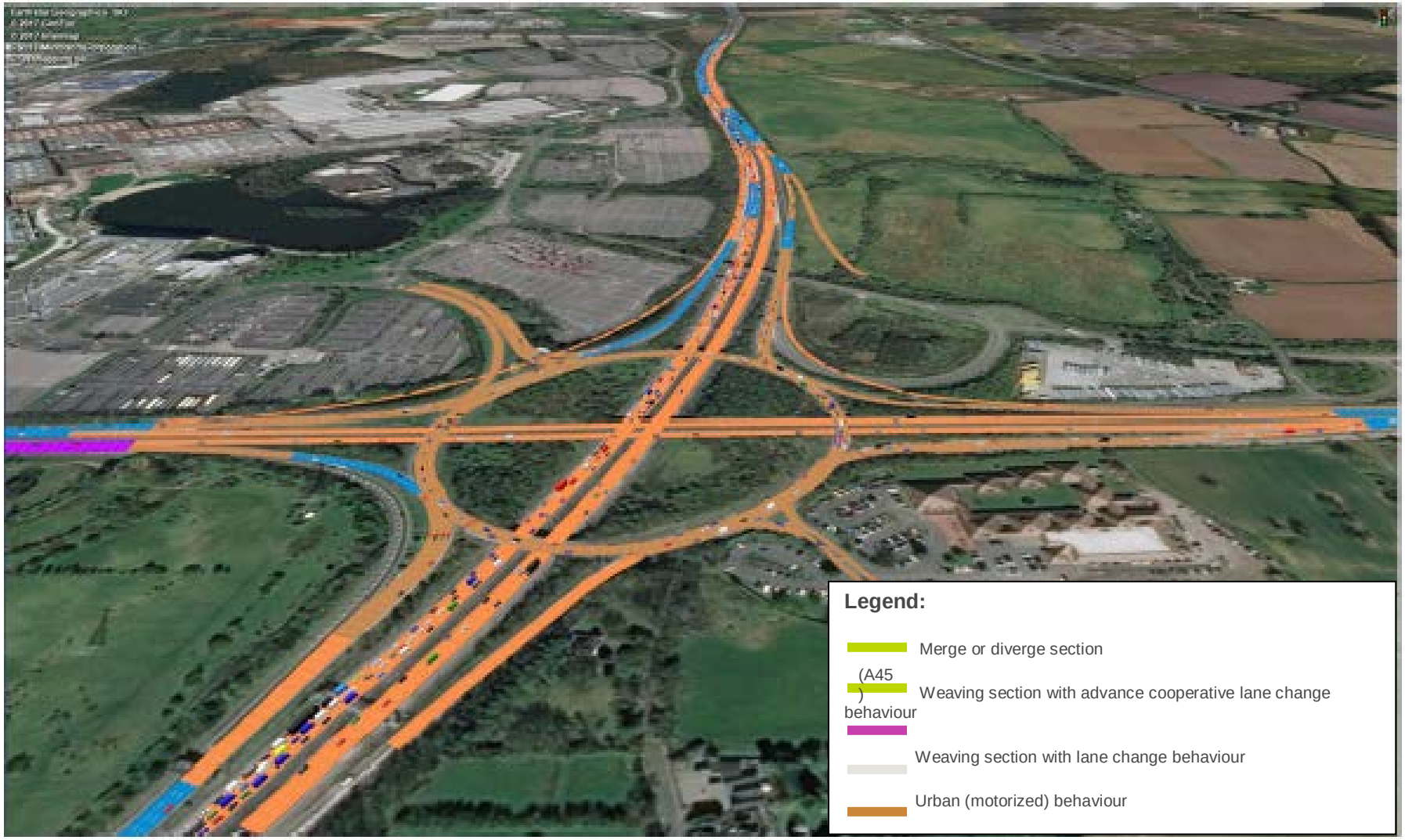
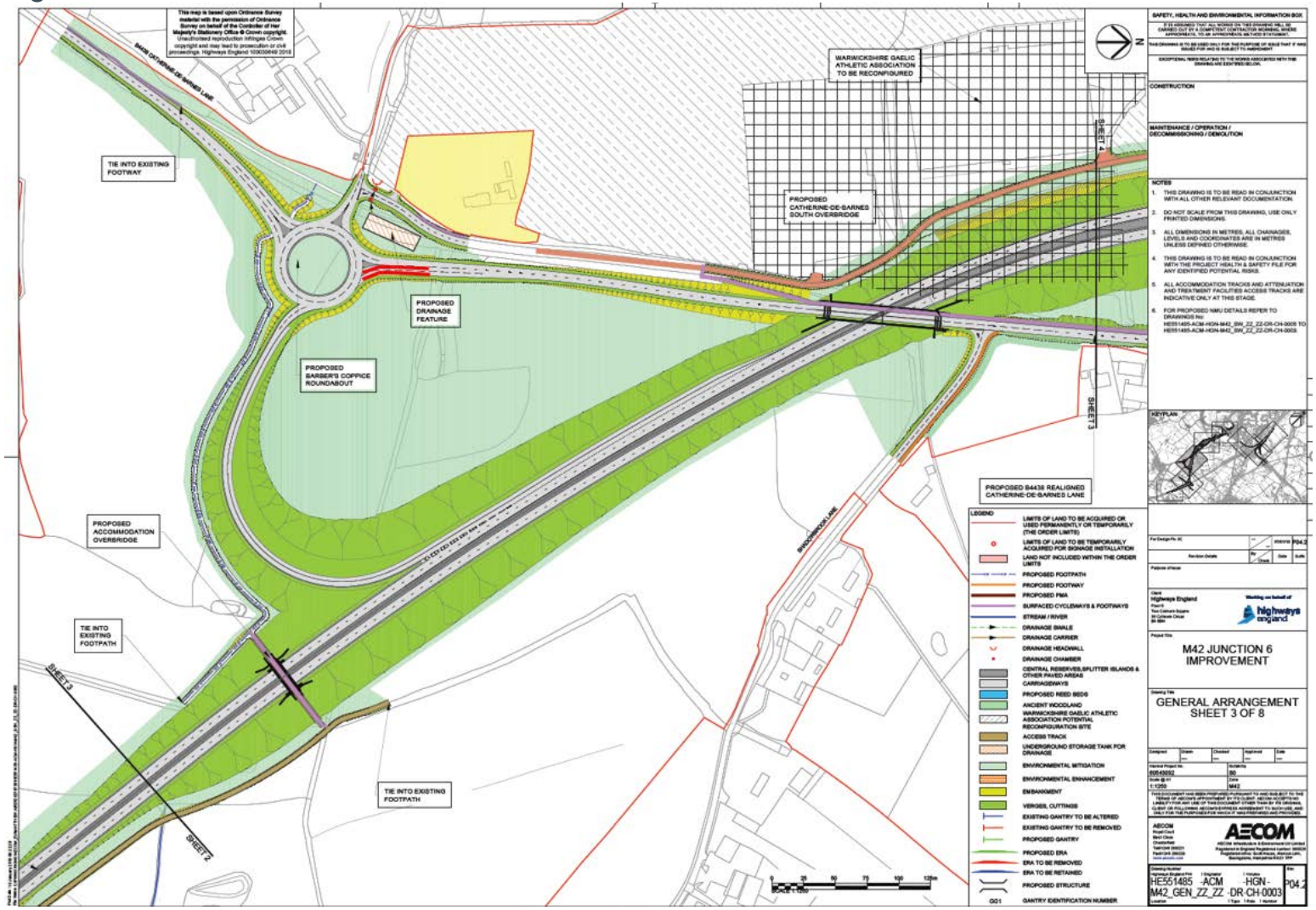


Figure 6


WARWICKSHIRE GAELIC ATHLETIC ASSOCIATION TO BE RECONFIGURED
TIE INTO EXISTING FOOTWAY
PROPOSED CATHERINE-DE-BARNES SOUTH OVERBRIDGE
PROPOSED DRAINAGE FEATURE
PROPOSED BARBER'S COPPICE ROUNDABOUT
PROPOSED ACCOMMODATION OVERBRIDGE
TIE INTO EXISTING FOOTPATH
TIE INTO EXISTING FOOTPATH
PROPOSED B4438 REALIGNED CATHERINE-DE-BARNES LANE
SHEET 1
SHEET 2
SHEET 3
SHEET 4
M42 JUNCTION 6 IMPROVEMENT
GENERAL ARRANGEMENT SHEET 3 OF 8
HE551485 -ACM -HGN- M42_GEN_ZZ_ZZ -DR-CH-0003
P04.2

Appendix C

Annex of Compulsory Acquisition Objections Table

Obj No.	Name/ Organisation	IP/AP Ref No.	RR Ref No.	WR Ref No.	Other Doc Ref No.	Interest	Permanent/ Temporary	Plot(s)	CA?	Status of Objection	Additional Comments
1	Mr Heath Cotterill		RR-018 AS-016	REP1-031		Part 2	N/A	N/A	No		
2	The Woodland Trust		RR-032	REP1-028		N/A	N/A	N/A	N/A		
3	Natural England		RR-021	REP1-018 REP1-019		N/A	N/A	N/A	N/A		
4	Warwickshire Wildlife Trust		RR-035			Part 1 Part 1 Part 1	Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights	3/22a 3/22b 3/25 (subsoil)	Yes		

5	The National Exhibition Centre		RR-014	REP1-016		Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 & 3 Part 1 & 3 Part 1 & 3 Part 3 Part 1 Part 1 Part 1	Permanent Temporary Temporary Temporary with permanent rights Temporary Permanent Temporary Temporary with permanent rights Permanent Temporary Temporary with permanent rights Permanent Permanent Temporary Permanent Temporary	4/3t 4/3u 4/3v 4/3af 4/3ag 5/29a 5/29b 5/29c 5/29m 5/29t 5/29u 5/29v 5/29w 5/29y 6/2a 6/2c	Yes		

6	Genting Solihull Limited		RR-013			Part 3	Temporary with permanent rights	4/3o	Yes		
						Part 3	Temporary with permanent rights	4/3p			
						Part 3	Permanent	4/3q			
						Part 3	Permanent	4/3t			
						Part 3	Temporary	4/3u			
						Part 3	Temporary	4/3v			
						Part 3	Temporary with permanent rights	4/3af			
						Part 3	Temporary	4/3ag			
						Part 3	Permanent	5/29a			
						Part 3	Temporary	5/29b			
						Part 1 & 3	Temporary with permanent rights	5/29c			
						Part 3	Permanent	5/29d			
						Part 3	Permanent	5/29e			
						Part 3	Permanent	5/29f			
						Part 3	Permanent	5/29g			
						Part 3	Temporary with permanent rights	5/29h			
						Part 3	Permanent	5/29i			
						Part 3	Permanent	5/29l			

						Part 1 & 3	Permanent	5/29m			
						Part 3	Permanent	5/29n			
						Part 3	Permanent	5/29o			
						Part 3	Temporary	5/29p			
						Part 3	Permanent	5/29q			
						Part 3	Temporary	5/29r			
						Part 3	Permanent	5/29s			
						Part 1 & 3	Temporary	5/29t			
						Part 1 & 3	Temporary with permanent rights	5/29u			
						Part 3	Permanent	5/29v			
						Part 3	Permanent	5/29w			
						Part 3	Temporary	5/29y			
						Part 3	Permanent	6/2a			
						Part 3	Permanent	6/2b			
						Part 3	Temporary	6/2c			

7	Catherine-de-Barnes Resident Association		RR-007	REP1-010		N/A	N/A	N/A	N/A		
8	Birmingham Airport Limited		RR-003 AS-002			Part 3 Part 3 Part 3 Part 3 Part 3 Part 3 Part 3 Part 3 Part 1 & 3 Part 3 Part 3 Part 3 Part 3 Part 3 Part 3	Temporary Permanent Permanent Permanent Permanent Permanent Permanent Permanent Permanent Permanent Permanent Temporary Temporary Temporary Permanent	2/76a 2/76b 2/76c 2/76d 3/1a 3/1b 3/1c 3/1d 3/3a (subsoil & cat 2) 3/3b 3/3c 3/3d 3/15a 3/15c 3/15d	Yes		

						Part 3	Temporary	3/15e			
						Part 3	Permanent	3/15f			
						Part 3	Permanent	3/16			
						Part 3	Permanent	3/32a			
						Part 3	Temporary	3/32b			
						Part 3	Temporary	3/32c			
						Part 3	Permanent	3/40a			
						Part 3	Permanent	3/40b			
						Part 3	Permanent	3/43			
						Part 3	Permanent	3/44			
						Part 3	Permanent	3/45a			
						Part 3	Permanent	3/45b			
						Part 3	Permanent	3/45c			
						Part 3	Permanent	3/47			
						Part 3	Permanent	3/49			
						Part 1 & 3	Permanent	3/50			
						Part 1	Temporary	3/51a			
						Part 1	Permanent	3/51b			

						Part 1	Permanent	3/51c			
						Part 3	Permanent	3/53a			
						Part 3	Permanent	3/53b			
						Part 3	Permanent	3/53c			
						Part 3	Permanent	3/53d			
						Part 3	Temporary	3/58a			
						Part 3	Permanent	3/58b			
						Part 3	Permanent	3/66			
						Part 3	Permanent	3/67a			
						Part 3	Permanent	3/67b			
						Part 3	Permanent	3/68a			
						Part 3	Permanent	3/68b			
						Part 3	Permanent	3/72			
						Part 3	Permanent	3/73a			
						Part 3	Permanent	3/73b			
						Part 3	Permanent	3/73c			
						Part 3	Temporary with permanent rights	3/73d			
						Part 1	Permanent	3/73e			

						Part 3	Permanent	3/84			
						Part 1	Temporary	4/1a			
						Part 1	Temporary with permanent rights	4/1c			
						Part 1	Temporary with permanent rights	4/1d			
						Part 1	Temporary with permanent rights	4/1f			
						Part 1	Temporary with permanent rights	4/1g			
						Part 1	Temporary with permanent rights	4/1h			
						Part 1	Temporary	4/1i			
						Part 1	Permanent	4/1j			
						Part 1	Temporary with permanent rights	4/1k			
						Part 1	Permanent	4/1l			
						Part 1	Temporary with permanent rights	4/1m			
						Part 1	Temporary with permanent rights	4/1n			
						Part 1	Temporary	4/1p			
						Part 1	Temporary with permanent rights	4/1q			
						Part 1	Temporary with permanent rights	4/1r			
						Part 1	Temporary with permanent rights	4/1s			
						Part 1	Temporary with permanent rights	4/1t			

						Part 1	Temporary with permanent rights	4/1u			
						Part 1	Temporary with permanent rights	4/1v			
						Part 1	Temporary with permanent rights	4/1w			
						Part 1 & 3	Temporary with permanent rights	4/1x			
						Part 1 & 3	Temporary with permanent rights	4/1z			
						Part 1 & 3	Temporary	4/1aa			
						Part 1	Temporary with permanent rights	4/1ab			
						Part 1 & 3	Temporary with permanent rights	4/1ac			
						Part 1	Temporary	4/1ad			
						Part 1	Temporary	4/1af			
						Part 1 & 3	Temporary	4/1ag			
						Part 1	Temporary	4/1ah			
						Part 1 & 3	Temporary	4/1ai			
						Part 1	Temporary	4/1ak			
						Part 1 & 3	Temporary	4/1al			
						Part 1	Temporary with permanent rights	4/1am			
						Part 1	Temporary	4/1ao			
						Part 1	Temporary with permanent rights	4/1ap			

						Part 1	Temporary with permanent rights	4/1aq			
						Part 1	Temporary with permanent rights	4/1as			
						Part 1	Permanent	4/1au			
						Part 1 & 3	Temporary	4/1ax			
						Part 1	Temporary with permanent rights	4/1az			
						Part 1	Temporary with permanent rights	4/1ba			
						Part 1	Temporary with permanent rights	4/1bb			
						Part 1	Temporary with permanent rights	4/1bc			
						Part 1	Temporary with permanent rights	4/1bf			
						Part 1	Temporary	4/3ad			
						Part 3	Permanent	4/4a			
						Part 3	Permanent	4/4b			
						Part 3	Permanent	4/4d			
						Part 3	Permanent	4/4e			
						Part 3	Temporary with permanent rights	4/4g			
						Part 3	Temporary with permanent rights	4/4h			
						Part 3	Temporary with permanent rights	4/4k			
						Part 3	Temporary with permanent rights	4/4n			

						Part 3	Permanent	4/4o			
						Part 3	Permanent	4/4p			
						Part 3	Temporary with permanent rights	4/4u			
						Part 3	Temporary with permanent rights	4/4v			
						Part 3	Temporary with permanent rights	4/4w			
						Part 3	Temporary with permanent rights	4/4x			
						Part 1	Temporary with permanent rights	4/9 (subsoil)			
						Part 1	Temporary with permanent rights	4/59 (subsoil)			
						Part 1	Temporary with permanent rights	4/62 (subsoil)			
						Part 1	Temporary with permanent rights	4/66 (subsoil)			
						Part 1	Temporary with permanent rights	4/69 (subsoil)			
						Part 1	Temporary with permanent rights	4/71 (subsoil)			
						Part 1	Temporary with permanent rights	4/73 (subsoil)			
						Part 1	Temporary with permanent rights	4/76 (subsoil)			
						Part 1	Temporary with permanent rights	4/80 (subsoil)			
						Part 1	Temporary with permanent rights	4/82 (subsoil)			
						Part 1	Temporary with permanent rights	4/93 (subsoil)			
						Part 1	Temporary with permanent rights	4/147 (subsoil)			

						Part 1 Part 1 Part 1 Part 1 Part 1	Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights	4/149 (subsoil) 4/153 (subsoil) 4/155 (subsoil) 4/158 (subsoil) 4/159 (subsoil)			
9	Bracebridge Holdings		RR-009			Part 1 Part 1 Part 1 Part 1 Part 1	Permanent Permanent Permanent Permanent Permanent	5/22a 5/22b 5/22c 5/27 (subsoil) 5/32 (subsoil)	Yes		

10	MSA Extra Solihull Limited		RR-027			Part 3	Temporary	2/3a	Yes		
						Part 3	Permanent	2/3b			
						Part 3	Temporary with permanent rights	2/3c			
						Part 3	Temporary	2/3d			
						Part 3	Permanent	2/3e			
						Part 3	Temporary	2/3g			
						Part 3	Temporary	2/3h			
						Part 3	Temporary	2/3i			
						Part 3	Temporary	2/3j			
						Part 3	Permanent	2/3k			
						Part 3	Permanent	2/3m			
						Part 3	Permanent	2/3n			
						Part 3	Temporary with permanent rights	2/3o			
						Part 3	Temporary	2/3p			
						Part 3	Permanent	2/3q			
						Part 3	Temporary	2/3r			
						Part 3	Permanent	2/3s			
						Part 3	Temporary with permanent rights	2/3u			

						Part 3	Permanent	2/3v			
						Part 3	Temporary	2/3w			
						Part 3	Permanent	2/3x			
						Part 3	Permanent	2/3y			
						Part 3	Temporary	2/3z			
						Part 3	Temporary with permanent rights	2/3aa			
						Part 3	Temporary	2/3ab			
						Part 3	Permanent	2/3ac			
						Part 3	Permanent	2/3ad			
						Part 3	Temporary with permanent rights	2/3ah			
						Part 3	Permanent	2/3al			
						Part 3	Permanent	2/3am			
						Part 3	Permanent	2/3ar			
						Part 3	Temporary	2/58a			
						Part 1	Temporary	2/59 (riparian)			
						Part 1	Temporary	2/65			

11	Applegreen PLC		RR-001	REP1-005		N/A	N/A	N/A	N/A		
12	Páirc na hÉireann - Gaelic Athletics Association		RR-012	REP1-026 REP1-027		Part 1 Part 3 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1	Permanent Permanent Temporary Permanent Temporary Permanent Temporary Permanent	3/3a (subsoil) 3/3b 3/15a 3/15b 3/15c 3/15d 3/15e 3/15f	Yes		
13	Lansdowne Group		RR-010			Part 3 Part 3	Temporary with permanent rights Permanent	4/3p 4/8	Yes		
14	Josephine Smyth on behalf of Damian Smyth		RR-017			Part 1	Temporary with permanent rights	4/153 (subsoil)	Yes		
15	Estate of Mr D Rogers		RR-033			Part 1	Temporary with permanent rights	4/153 (subsoil)	Yes		
16	Philip O'Reilly		RR-025			Part 1 & 3 Part 1 Part 2	Permanent Permanent N/A	2/71 (subsoil & rights) 3/3a (subsoil) N/A	Yes		
17	Philip O'Reilly (Second Representation)		RR-026			Part 1 & 3 Part 1 Part 2	Permanent Permanent N/A	2/71 (subsoil & rights) 3/3a (subsoil) N/A	Yes		
18	Barbara		AS-014	REP1		Part 2	N/A	N/A	No		

	Tocher			-039							
19	Ministry of Defence		AS-008			N/A	N/A	N/A	N/A		
20	Coventry City Council		AS-004		AoC-001	Part 3 Part 3 Part 1 & 3 Part 1 & 3 Part 1 & 3 Part 1 & 3 Part 1 & 3 Part 3 Part 3 Part 1 & 3 Part 1 & 3 Part 3 Part 3 Part 3	Temporary with permanent rights Temporary Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights Temporary Temporary with permanent rights Temporary Temporary Temporary Temporary Temporary Temporary with permanent rights Temporary with permanent rights	4/1h 4/1i 4/1v 4/1x 4/1z 4/1aa 4/1ac 4/1af 4/1ag 4/1ai 4/1al 4/1ax 4/1bf 4/25a 4/25c	Yes		Listed as part of WMCA interests (listed)

21	Public Health England		AS-010			N/A	N/A	N/A	N/A		
22	Birmingham Dogs Home		AS-003			Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 & 3 Part 3	Permanent Permanent Permanent Permanent Permanent Permanent Temporary	2/10g (subsoil) 2/10i (subsoil) 2/68 2/69 (subsoil) 2/70 (subsoil) 2/71 (subsoil & rights) 2/76a	Yes		
23	Historic England		AS-007			N/A	N/A	N/A	N/A		
24	Birmingham City Council		AS-001			Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1	Permanent Permanent Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights Temporary Temporary with permanent rights Temporary with permanent rights Temporary Temporary	3/3a (subsoil) 3/84 4/1v 4/1x 4/1z 4/1aa 4/1ab 4/1ac 4/1ag 4/1ai	Yes		

						Part 1	Temporary	4/1al			
						Part 1	Temporary	4/1ax			
						Part 1	Permanent	4/3a			
						Part 1	Temporary with permanent rights	4/3b			
						Part 1	Temporary with permanent rights	4/3c			
						Part 1	Temporary with permanent rights	4/3d			
						Part 1	Temporary with permanent rights	4/3e			
						Part 1	Temporary with permanent rights	4/3f			
						Part 1	Temporary with permanent rights	4/3g			
						Part 1	Temporary with permanent rights	4/3h			
						Part 1	Temporary with permanent rights	4/3i			
						Part 1	Temporary with permanent rights	4/3j			
						Part 1	Temporary with permanent rights	4/3k			
						Part 1	Temporary with permanent rights	4/3l			
						Part 1	Temporary with permanent rights	4/3m			
						Part 1	Temporary	4/3n			
						Part 1	Temporary with permanent rights	4/3o			
						Part 1	Temporary with permanent rights	4/3p			

						Part 1	Permanent	4/3q			
						Part 1	Temporary	4/3r			
						Part 1	Temporary with permanent rights	4/3s			
						Part 1	Permanent	4/3t			
						Part 1 & 3	Temporary	4/3u			
						Part 1 & 3	Temporary	4/3v			
						Part 1	Permanent (excluding bridge & A45)	4/3w			
						Part 1	Temporary with permanent rights	4/3x			
						Part 1	Temporary with permanent rights	4/3y			
						Part 1	Permanent	4/3z			
						Part 1	Permanent	4/3aa			
						Part 1	Temporary with permanent rights	4/3ab			
						Part 1	Permanent	4/3ac			
						Part 1	Temporary	4/3ad			
						Part 1	Temporary with permanent rights	4/3ae			
						Part 1	Temporary with permanent rights	4/3af			
						Part 1 & 3	Temporary	4/3ag			
						Part 1	Temporary with permanent rights	4/3ah			

						Part 1	Temporary with permanent rights	4/3ai			
						Part 1	Temporary with permanent rights	4/3aj			
						Part 1	Temporary with permanent rights	4/10			
						Part 1	Temporary with permanent rights	4/59 (subsoil)			
						Part 1	Temporary with permanent rights	4/80 (subsoil)			
						Part 1	Temporary with permanent rights	4/91 (subsoil)			
						Part 1	Temporary with permanent rights	4/93 (subsoil)			
						Part 1	Temporary with permanent rights	4/153 (subsoil)			
						Part 1	Temporary with permanent rights	4/155 (subsoil)			
						Part 1	Temporary with permanent rights	4/156 (subsoil)			
						Part 1	Temporary with permanent rights	4/160 (subsoil)			
						Part 1	Permanent	5/29a			
						Part 1	Temporary	5/29b			
						Part 1 & 3	Temporary with permanent rights	5/29c			
						Part 1	Permanent	5/29d			
						Part 1	Permanent	5/29e			
						Part 1	Permanent	5/29f			
						Part 1	Permanent	5/29g			

						Part 1	Temporary with permanent rights	5/29h			
						Part 1	Permanent	5/29i			
						Part 1	Permanent	5/29l			
						Part 1 & 3	Permanent	5/29m			
						Part 1	Permanent	5/29n			
						Part 1	Permanent	5/29o			
						Part 1	Temporary	5/29p			
						Part 1	Permanent	5/29q			
						Part 1	Temporary	5/29r			
						Part 1	Permanent	5/29s			
						Part 1	Temporary	5/29t			
						Part 1 & 3	Temporary with permanent rights	5/29u			
						Part 1	Permanent	5/29v			
						Part 1	Permanent	5/29w			
						Part 1 & 3	Temporary	5/29y			
						Part 1	Permanent	6/2a			
						Part 1	Permanent	6/2b			
						Part 1	Temporary	6/2c			

25	Bickenhill and Marston Green Parish Council		AS-015	REP1-006		N/A	N/A	N/A	N/A		
26	Open Spaces Society		RR-030 AS-012	REP1-020 REP1-021		N/A	N/A	N/A	N/A		
27	The Ramblers – Warwickshire Area		RR-031			N/A	N/A	N/A	N/A		
28	High Speed Two (HS2) Ltd (High Speed Two (HS2) Ltd)		RR-016			N/A	N/A	N/A	N/A		

29	National Grid		RR-020	REP1-017		Part 1	Permanent	2/1c	Yes		Combined National Grid plc and National Grid Electricity Transmission (NGET) NGET all Cat 2 interests (part 3)
						Part 1	Permanent	2/1d			
						Part 1	Permanent	2/3e			
						Part 1	Permanent	2/3y			
						Part 1	Temporary	2/3z			
						Part 1	Permanent	2/40			
						Part 1 & 3	Temporary	2/58a			
						Part 3	Temporary	2/65			
						Part 1	Permanent	3/8c			
						Part 1	Permanent	3/8e			
						Part 1	Permanent	3/8f			
						Part 1	Permanent	3/8g			
						Part 1	Permanent	3/76			
						Part 1	Temporary	5/1a			
						Part 1	Temporary	5/1c			
						Part 1	Permanent	5/2a			
						Part 1	Permanent	5/2f			
						Part 1	Permanent	5/2g			

						Part 1	Permanent	5/2y			
						Part 1	Permanent	5/2z			
						Part 1	Temporary with permanent rights	5/7			
						Part 1	Temporary with permanent rights	5/29c			
						Part 1	Permanent	5/29f			
						Part 1	Temporary with permanent rights	5/29h			
						Part 1	Temporary	5/29t			
						Part 1	Temporary with permanent rights	5/29u			
						Part 1	Permanent	6/1a			
						Part 1	Permanent	6/2a			
						Part 1	Temporary	6/2c			
						Part 1	Permanent	7/1f			

30	Cadent Gas Limited		RR-005	REP1-008		Part 1	Permanent	2/1h	Yes		
						Part 1	Permanent	2/2e			
						Part 1	Temporary with permanent rights	2/3c			
						Part 1	Temporary	2/3d			
						Part 1	Permanent	2/3e			
						Part 1	Permanent	2/3k			
						Part 1	Temporary with permanent rights	2/3u			
						Part 1 & 3	Permanent	2/3am			
						Part 1	Permanent	2/3ar			
						Part 1 & 3	Temporary with permanent rights	3/4b			
						Part 1 & 3	Permanent	3/4g			
						Part 1 & 3	Temporary with permanent rights	3/22a			
						Part 1	Temporary with permanent rights	4/1c			
						Part 1	Temporary with permanent rights	4/1d			
						Part 1	Temporary with permanent rights	4/1h			
						Part 1	Temporary with permanent rights	4/1u			
						Part 1	Temporary with permanent rights	4/1w			
						Part 1 & 3	Temporary with permanent rights	4/2a			

						Part 1 & 3	Temporary	4/2b			
						Part 1	Temporary with permanent rights	4/3c			
						Part 1	Temporary with permanent rights	4/3d			
						Part 1	Temporary with permanent rights	4/3e			
						Part 1	Temporary with permanent rights	4/3m			
						Part 1	Temporary	4/3n			
						Part 1	Temporary with permanent rights	4/3o			
						Part 1	Temporary with permanent rights	4/3p			
						Part 1	Permanent	4/3q			
						Part 1	Permanent	4/3t			
						Part 1 & 3	Temporary	4/3u			
						Part 1 & 3	Temporary	4/3v			
						Part 1	Temporary with permanent rights	4/3x			
						Part 1	Temporary with permanent rights	4/3af			
						Part 1	Temporary	4/3ag			
						Part 1	Temporary with permanent rights	4/3aj			
						Part 1	Temporary with permanent rights	4/6a			
						Part 1	Temporary with permanent rights	4/6f			

						Part 1	Temporary with permanent rights	4/6h			
						Part 1	Temporary with permanent rights	4/6n			
						Part 1	Permanent	4/8			
						Part 3	Temporary with permanent rights	4/25f			
						Part 1 & 3	Permanent	4/25h			
						Part 3	Temporary	4/25t			
						Part 3	Temporary	4/25v			
						Part 1 & 3	Temporary with permanent rights	4/25w			
						Part 1	Temporary with permanent rights	4/59			
						Part 1	Temporary with permanent rights	4/66			
						Part 1	Temporary with permanent rights	4/82			
						Part 1	Temporary with permanent rights	4/89			
						Part 1	Temporary with permanent rights	4/91			
						Part 1	Temporary with permanent rights	4/93			
						Part 1	Temporary with permanent rights	4/94			
						Part 1	Temporary with permanent rights	4/99			
						Part 1	Permanent	4/138			
						Part 1	Temporary with permanent rights	4/156			

						Part 1	Temporary with permanent rights	4/158			
						Part 1	Temporary with permanent rights	4/159			
						Part 1	Temporary	5/1a			
						Part 1	Permanent	5/2a			
						Part 1	Permanent	5/2d			
						Part 1	Permanent	5/2u			
						Part 1	Permanent	5/2v			
						Part 1	Permanent	5/2w			
						Part 1	Permanent	5/2x			
						Part 1	Permanent	5/2y			
						Part 1 & 3	Permanent	5/2z			
						Part 1	Permanent	5/4			
						Part 1	Permanent	5/25			
						Part 1	Permanent	5/27			
						Part 3	Temporary	6/2c			

31	Esso Petroleum Company Limited		RR-034 AS-021			Part 1 & 3 Part 1 Part 1 Part 1 Part 1 & 3 Part 1 & 3 Part 1 & 3 Part 3	Temporary with permanent rights Permanent Permanent Permanent Temporary with permanent rights Temporary with permanent rights Permanent Temporary with permanent rights	2/3u 2/3am 2/10i 2/70 2/76a 2/76c 3/1f 4/102	Yes		
32	Network Rail		RR-022			Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1	Permanent Permanent Permanent Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights Temporary with permanent rights	3/8e 3/8f 3/76 4/25d 4/25s 4/91 4/150 4/151 4/152	Yes		

33	Western Power Distribution		RR-024			Part 1	Permanent	2/1b	Yes		
						Part 1	Permanent	2/1i			
						Part 1	Temporary	2/3d			
						Part 1	Permanent	2/3e			
						Part 1	Temporary	2/3h			
						Part 1	Temporary	2/3i			
						Part 1	Permanent	2/3k			
						Part 1	Temporary with permanent rights	2/3o			
						Part 1	Permanent	2/3s			
						Part 1	Temporary with permanent rights	2/3u			
						Part 1	Temporary	2/3w			
						Part 1	Temporary	2/3z			
						Part 1	Temporary with permanent rights	2/3aa			
						Part 1	Temporary	2/3ab			
						Part 1	Permanent	2/3ac			
						Part 1	Permanent	2/3ad			
						Part 1	Permanent	2/3am			
						Part 1	Temporary	2/10a			

						Part 1	Temporary	2/10b			
						Part 1	Permanent	2/10g			
						Part 1	Permanent	2/10i			
						Part 1	Permanent	2/10j			
						Part 1	Temporary	2/11			
						Part 1	Temporary with permanent rights	2/29			
						Part 1	Temporary with permanent rights	2/30			
						Part 1	Permanent	2/33			
						Part 1	Temporary	2/58b			
						Part 1	Permanent	2/60			
						Part 1	Temporary	2/62a			
						Part 1	Permanent	2/62b			
						Part 1	Temporary	2/65			
						Part 1	Permanent	2/68			
						Part 1	Permanent	2/71			
						Part 1	Permanent	2/76b			
						Part 1	Permanent	3/3a			
						Part 1	Permanent	3/8c			

						Part 1	Permanent	3/8g			
						Part 1	Permanent	3/15f			
						Part 1	Permanent	3/16			
						Part 1	Temporary with permanent rights	3/23			
						Part 1	Permanent	3/27			
						Part 1	Permanent	3/32a			
						Part 1	Permanent	3/47			
						Part 1	Permanent	3/51c			
						Part 1	Temporary	3/58a			
						Part 3	Permanent	3/68b			
						Part 1	Permanent	3/72			
						Part 1	Temporary with permanent rights	3/73d			
						Part 1	Temporary with permanent rights	3/87a			
						Part 1	Temporary	3/87b			
						Part 1	Temporary with permanent rights	4/1c			
						Part 1	Temporary with permanent rights	4/1d			
						Part 1	Temporary with permanent rights	4/1f			
						Part 1	Temporary with permanent rights	4/1g			

						Part 1	Temporary with permanent rights	4/1h			
						Part 1	Temporary with permanent rights	4/1k			
						Part 1	Temporary with permanent rights	4/1n			
						Part 1	Temporary	4/1p			
						Part 1	Temporary with permanent rights	4/1r			
						Part 1	Temporary with permanent rights	4/1s			
						Part 1	Temporary with permanent rights	4/1t			
						Part 1	Temporary with permanent rights	4/1u			
						Part 1	Temporary with permanent rights	4/1v			
						Part 1	Temporary with permanent rights	4/1w			
						Part 1	Temporary with permanent rights	4/1x			
						Part 1	Temporary with permanent rights	4/1z			
						Part 1	Temporary	4/1al			
						Part 1	Temporary with permanent rights	4/1am			
						Part 1	Temporary	4/1ao			
						Part 1	Temporary with permanent rights	4/1ap			
						Part 1	Temporary with permanent rights	4/1aq			
						Part 1	Temporary with permanent rights	4/1as			

						Part 1	Permanent	4/1au			
						Part 1	Temporary with permanent rights	4/1ba			
						Part 1	Temporary with permanent rights	4/1bb			
						Part 1	Temporary with permanent rights	4/1bc			
						Part 1	Temporary with permanent rights	4/1bf			
						Part 1	Temporary with permanent rights	4/2a			
						Part 1	Permanent	4/3a			
						Part 1	Temporary with permanent rights	4/3c			
						Part 1	Temporary with permanent rights	4/3d			
						Part 1	Temporary with permanent rights	4/3e			
						Part 1	Temporary with permanent rights	4/3f			
						Part 1	Temporary with permanent rights	4/3i			
						Part 1	Temporary with permanent rights	4/3j			
						Part 1	Temporary with permanent rights	4/3l			
						Part 1	Temporary	4/3n			
						Part 1	Temporary with permanent rights	4/3o			
						Part 1	Temporary with permanent rights	4/3p			
						Part 1	Permanent	4/3q			

						Part 3	Temporary	4/3r			
						Part 1	Permanent	4/3t			
						Part 1 & 3	Temporary	4/3u			
						Part 1 & 3	Temporary	4/3v			
						Part 1	Permanent (excluding bridge and A45)	4/3w			
						Part 1	Temporary with permanent rights	4/3x			
						Part 1	Temporary with permanent rights	4/3y			
						Part 1	Temporary with permanent rights	4/3ab			
						Part 1	Temporary with permanent rights	4/3ae			
						Part 1 & 3	Temporary	4/3ag			
						Part 1	Temporary with permanent rights	4/3aj			
						Part 1	Permanent	4/4b			
						Part 1	Permanent	4/4d			
						Part 1	Temporary with permanent rights	4/4g			
						Part 1	Temporary with permanent rights	4/4k			
						Part 1	Temporary with permanent rights	4/4u			
						Part 1	Temporary with permanent rights	4/4v			
						Part 1	Temporary with permanent rights	4/4w			

						Part 1	Temporary with permanent rights	4/6a			
						Part 1	Temporary with permanent rights	4/6b			
						Part 1	Temporary with permanent rights	4/6d			
						Part 1	Temporary with permanent rights	4/6e			
						Part 1	Temporary with permanent rights	4/6f			
						Part 1	Temporary with permanent rights	4/6g			
						Part 1	Temporary with permanent rights	4/6h			
						Part 1	Temporary with permanent rights	4/6n			
						Part 1	Temporary with permanent rights	4/6p			
						Part 1	Temporary with permanent rights	4/7a			
						Part 1	Temporary with permanent rights	4/7b			
						Part 1	Temporary	4/8			
						Part 1	Permanent	4/9			
						Part 1	Temporary with permanent rights	4/11a			
						Part 1	Temporary with permanent rights	4/11b			
						Part 1	Temporary	4/25a			
						Part 1	Temporary with permanent rights	4/25b			
						Part 1	Temporary with permanent rights	4/25d			

						Part 1	Temporary with permanent rights	4/25e			
						Part 1	Temporary with permanent rights	4/25f			
						Part 1	Temporary with permanent rights	4/25g			
						Part 1	Temporary with permanent rights	4/25h			
						Part 1 & 3	Permanent	4/25i			
						Part 1	Temporary with permanent rights	4/25j			
						Part 1	Temporary with permanent rights	4/25k			
						Part 1 & 3	Permanent	4/25l			
						Part 1	Temporary with permanent rights	4/25m			
						Part 1	Temporary with permanent rights	4/25n			
						Part 1	Temporary with permanent rights	4/25o			
						Part 1	Temporary with permanent rights	4/25p			
						Part 1	Temporary with permanent rights	4/25q			
						Part 1	Temporary with permanent rights	4/25r			
						Part 1	Permanent	4/25s			
						Part 1	Temporary with permanent rights	4/25u			
						Part 1	Temporary with permanent rights	4/25v			
						Part 1	Temporary	4/25w			

						Part 1	Temporary with permanent rights	4/59			
						Part 1	Temporary with permanent rights	4/62			
						Part 1	Temporary with permanent rights	4/66			
						Part 1	Temporary with permanent rights	4/69			
						Part 1	Temporary with permanent rights	4/71			
						Part 1	Temporary with permanent rights	4/73			
						Part 1	Temporary with permanent rights	4/76			
						Part 1	Temporary with permanent rights	4/82			
						Part 1	Temporary with permanent rights	4/89			
						Part 1	Temporary with permanent rights	4/91			
						Part 1	Temporary with permanent rights	4/93			
						Part 1	Temporary with permanent rights	4/94			
						Part 1	Temporary with permanent rights	4/99			
						Part 1	Temporary with permanent rights	4/102			
						Part 1	Temporary with permanent rights	4/106			
						Part 1	Temporary with permanent rights	4/109			
						Part 1	Temporary with permanent rights	4/138			
						Part 1	Permanent	4/147			

						Part 1	Temporary with permanent rights	4/149			
						Part 1	Temporary with permanent rights	4/151			
						Part 1	Temporary with permanent rights	4/153			
						Part 1	Temporary with permanent rights	4/155			
						Part 1	Temporary with permanent rights	4/156			
						Part 1	Temporary with permanent rights	4/158			
						Part 1	Temporary with permanent rights	4/159			
						Part 1	Temporary with permanent rights	4/160			
						Part 1	Temporary with permanent rights	5/1a			
						Part 1	Temporary	5/1b			
						Part 1	Temporary with permanent rights	5/2a			
						Part 1	Permanent	5/2e			
						Part 1	Permanent	5/2f			
						Part 1	Permanent	5/2g			
						Part 1	Permanent	5/2i			
						Part 1	Permanent	5/2j			
						Part 1	Permanent	5/2u			
						Part 1	Permanent	5/2y			

						Part 1	Permanent	5/2z			
						Part 1	Permanent	5/2ab			
						Part 1	Permanent	5/2ac			
						Part 1	Permanent	5/3			
						Part 1	Permanent	5/4			
						Part 1	Permanent	5/7			
						Part 1	Temporary with permanent rights	5/15a			
						Part 1	Permanent	5/22a			
						Part 1	Permanent	5/22b			
						Part 1	Permanent	5/25			
						Part 1	Permanent	5/27			
						Part 1	Permanent	5/29a			
						Part 1	Permanent	5/29c			
						Part 1	Temporary with permanent rights	5/29d			
						Part 1	Permanent	5/29f			
						Part 1	Permanent	5/29g			
						Part 1	Permanent	5/29h			
						Part 1	Temporary with permanent rights	5/29i			

						Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1 Part 1	Permanent Permanent Permanent Temporary Temporary with permanent rights Permanent Permanent Permanent Permanent Permanent Temporary	5/29m 5/29o 5/29t 5/29u 5/29v 5/29w 6/1a 6/2a 6/2b 6/2c			
34	Severn Trent Water		AS-013			Part 1 Part 1 Part 1	Temporary Permanent Temporary with permanent rights	2/2a 2/2b 2/2c	Yes		

						Part 1	Permanent	2/2d			
						Part 1	Permanent	2/2e			
						Part 3	Temporary with permanent rights	2/3u			
						Part 1 & 3	Temporary with permanent rights	2/3aa			
						Part 1 & 3	Permanent	2/3am			
						Part 1	Temporary	2/76a			
						Part 1	Permanent	2/76c			
						Part 1 & 3	Permanent	3/1f			
						Part 1 & 3	Temporary with permanent rights	3/4b			
						Part 1	Temporary with permanent rights	4/1c			
						Part 1	Temporary with permanent rights	4/1d			
						Part 1	Temporary with permanent rights	4/1h			
						Part 1	Temporary with permanent rights	4/1n			
						Part 1	Temporary with permanent rights	4/1s			
						Part 1	Temporary with permanent rights	4/1t			
						Part 1	Temporary with permanent rights	4/1w			
						Part 1	Temporary with permanent rights	4/1aq			
						Part 1	Temporary with permanent rights	4/1as			

						Part 1 & 3	Permanent	4/1au			
						Part 1	Temporary with permanent rights	4/1bb			
						Part 1	Temporary with permanent rights	4/1bc			
						Part 1	Temporary with permanent rights	4/1bf			
						Part 1	Temporary with permanent rights	4/3c			
						Part 1	Temporary with permanent rights	4/3d			
						Part 1	Temporary with permanent rights	4/3j			
						Part 1	Temporary with permanent rights	4/3l			
						Part 1	Temporary with permanent rights	4/3m			
						Part 1	Temporary	4/3n			
						Part 1	Temporary with permanent rights	4/3o			
						Part 1	Temporary with permanent rights	4/3p			
						Part 1	Temporary with permanent rights	4/3s			
						Part 1	Temporary with permanent rights	4/3x			
						Part 1	Temporary with permanent rights	4/3y			
						Part 1	Temporary with permanent rights	4/3ab			
						Part 1	Permanent	4/3ac			
						Part 1	Temporary with permanent rights	4/3aj			

						Part 1 & 3	Permanent	4/4j			
						Part 1 & 3	Permanent	4/4p			
						Part 1 & 3	Permanent	4/4r			
						Part 1 & 3	Temporary with permanent rights	4/4u			
						Part 1	Temporary with permanent rights	4/4v			
						Part 1 & 3	Temporary with permanent rights	4/4w			
						Part 1	Temporary with permanent rights	4/6a			
						Part 1	Temporary with permanent rights	4/6b			
						Part 1	Temporary with permanent rights	4/6d			
						Part 1	Temporary with permanent rights	4/6f			
						Part 1	Temporary with permanent rights	4/6g			
						Part 1	Temporary with permanent rights	4/6h			
						Part 1	Temporary with permanent rights	4/6n			
						Part 1	Permanent	4/8			
						Part 1	Temporary with permanent rights	4/9			
						Part 1	Temporary with permanent rights	4/11a			
						Part 1	Temporary with permanent rights	4/25a			
						Part 1	Temporary with permanent rights	4/25b			

						Part 1	Temporary	4/25c			
						Part 1	Temporary with permanent rights	4/25d			
						Part 1	Temporary with permanent rights	4/25f			
						Part 1	Temporary with permanent rights	4/25g			
						Part 1	Permanent	4/25h			
						Part 1	Temporary with permanent rights	4/25i			
						Part 1	Temporary with permanent rights	4/25j			
						Part 1	Temporary with permanent rights	4/25m			
						Part 1 & 3	Temporary with permanent rights	4/25q			
						Part 1	Permanent	4/25r			
						Part 1 & 3	Temporary with permanent rights	4/25u			
						Part 1	Temporary	4/25v			
						Part 1	Temporary with permanent rights	4/25w			
						Part 1	Temporary with permanent rights	4/59			
						Part 1	Temporary with permanent rights	4/66			
						Part 1	Temporary with permanent rights	4/82			
						Part 1	Temporary with permanent rights	4/89			
						Part 1	Temporary with permanent rights	4/91			

						Part 1	Temporary with permanent rights	4/93			
						Part 1	Temporary with permanent rights	4/99			
						Part 1	Temporary with permanent rights	4/102			
						Part 1	Temporary with permanent rights	4/106			
						Part 1	Temporary with permanent rights	4/109			
						Part 1	Temporary with permanent rights	4/149			
						Part 1	Temporary with permanent rights	4/150			
						Part 1	Temporary with permanent rights	4/153			
						Part 1	Temporary with permanent rights	4/155			
						Part 1	Temporary with permanent rights	4/156			
						Part 1	Temporary with permanent rights	4/158			
						Part 1	Temporary with permanent rights	4/159			
						Part 1	Temporary with permanent rights	4/160			
						Part 1	Permanent	5/2a			
						Part 1	Permanent	5/2e			
						Part 1	Permanent	5/2j			
						Part 1	Permanent	5/2k			
						Part 1	Permanent	5/2t			

						Part 1	Permanent	5/2u			
						Part 1	Permanent	5/2v			
						Part 1	Permanent	5/2w			
						Part 1	Permanent	5/2x			
						Part 1	Permanent	5/2z			
						Part 1	Permanent	5/2aa			
						Part 1	Permanent	5/2ab			
						Part 1	Permanent	5/3			
						Part 1	Temporary with permanent rights	5/7			
						Part 1	Permanent	5/22b			
						Part 1	Permanent	5/22c			
						Part 1	Permanent	5/25			
						Part 1	Permanent	5/26			
						Part 1	Permanent	5/27			
						Part 1	Permanent	5/32			
						Part 1	Permanent	5/40			
						Part 1	Temporary	5/62			
						Part 1	Permanent	7/1b			

35	Harlaxton Energy Networks Ltd		AS-005				N/A	N/A	N/A		
36	North Warwickshire Borough Council		RR-023		AoC-004		N/A	N/A	N/A		
37	Solihull Metropolitan Borough Council		RR-028	REP1-015	AoC-005	Part 1	Permanent	1/1a	Yes		
						Part 1	Permanent	1/1c			
						Part 1	Permanent	2/1b			
						Part 1	Permanent	2/1c			
						Part 1	Permanent	2/1d			
						Part 1	Permanent	2/1e			
						Part 1	Permanent	2/1f			
						Part 1	Permanent	2/1g			
						Part 1	Temporary with permanent rights	2/3u			
						Part 1	Permanent	2/3v			
						Part 1	Temporary	2/3w			

						Part 1	Temporary with permanent rights	2/3aa			
						Part 1	Temporary	2/3ab			
						Part 1	Permanent	2/3am			
						Part 1	Temporary	2/10a			
						Part 1	Temporary	2/10b			
						Part 1	Temporary with permanent rights	2/10c			
						Part 1	Permanent	2/10d			
						Part 1	Permanent	2/10e			
						Part 1	Permanent	2/10g			
						Part 1	Permanent	2/10h			
						Part 1	Permanent	2/10i			
						Part 1	Permanent	2/10j			
						Part 1	Temporary	2/11			
						Part 1	Temporary	2/22			
						Part 1	Temporary with permanent rights	2/29			
						Part 1	Temporary with permanent rights	2/30			
						Part 1	Permanent	2/33			
						Part 1	Permanent	2/40			

						Part 1	Permanent	2/42			
						Part 1	Temporary	2/52			
						Part 1	Permanent	2/54			
						Part 1	Permanent	2/60			
						Part 1	Permanent	2/69			
						Part 1	Permanent	2/70			
						Part 1	Permanent	2/71			
						Part 1	Permanent	3/1a			
						Part 1	Permanent	3/1b			
						Part 1	Permanent	3/1c			
						Part 1	Permanent	3/2			
						Part 1	Permanent	3/3a			
						Part 1	Permanent	3/3b			
						Part 1	Permanent	3/3c			
						Part 1	Temporary	3/3d			
						Part 1	Permanent	3/4b			
						Part 1	Permanent	3/8a			
						Part 1	Permanent	3/8b			

						Part 1	Permanent	3/8c			
						Part 1	Permanent	3/8d			
						Part 1	Temporary	3/15a			
						Part 1	Temporary	3/15c			
						Part 1	Temporary	3/15e			
						Part 1	Permanent	3/15f			
						Part 1	Temporary with permanent rights	3/23			
						Part 1	Temporary with permanent rights	3/25			
						Part 1	Permanent	3/27			
						Part 1	Permanent	3/40b			
						Part 1	Permanent	3/47			
						Part 1	Permanent	3/49			
						Part 1	Permanent	3/53a			
						Part 1	Permanent	3/53c			
						Part 1	Permanent	3/53d			
						Part 1	Temporary	3/57			
						Part 1	Temporary	3/58a			
						Part 1	Permanent	3/58b			

						Part 1	Permanent	3/59			
						Part 1	Permanent	3/66			
						Part 1	Permanent	3/68a			
						Part 1	Permanent	3/73c			
						Part 1	Temporary with permanent rights	3/73f			
						Part 1	Permanent	3/84			
						Part 1 & 3	Temporary	4/1a			
						Part 1 & 3	Temporary with permanent rights	4/1c			
						Part 1	Temporary with permanent rights	4/1d			
						Part 1	Temporary with permanent rights	4/1f			
						Part 1 & 3	Temporary with permanent rights	4/1g			
						Part 1 & 3	Temporary with permanent rights	4/1h			
						Part 1 & 3	Temporary	4/1i			
						Part 1	Permanent	4/1j			
						Part 1	Temporary with permanent rights	4/1k			
						Part 1	Permanent	4/1l			
						Part 1	Temporary with permanent rights	4/1m			
						Part 1	Temporary with permanent rights	4/1n			

						Part 1	Temporary	4/1p			
						Part 1	Temporary with permanent rights	4/1q			
						Part 1	Temporary with permanent rights	4/1r			
						Part 1	Temporary with permanent rights	4/1s			
						Part 1	Temporary with permanent rights	4/1t			
						Part 1	Temporary with permanent rights	4/1u			
						Part 1	Temporary with permanent rights	4/1v			
						Part 1	Temporary with permanent rights	4/1w			
						Part 1	Temporary with permanent rights	4/1x			
						Part 1	Temporary with permanent rights	4/1z			
						Part 1	Temporary	4/1aa			
						Part 1	Temporary with permanent rights	4/1ac			
						Part 1	Temporary	4/1ad			
						Part 1	Temporary	4/1af			
						Part 1	Temporary	4/1ag			
						Part 1	Temporary	4/1ah			
						Part 1	Temporary	4/1ai			
						Part 1	Temporary	4/1ak			

						Part 1	Temporary	4/1al			
						Part 1	Temporary	4/1ao			
						Part 1	Temporary with permanent rights	4/1ap			
						Part 1	Temporary with permanent rights	4/1aq			
						Part 1	Temporary with permanent rights	4/1as			
						Part 1	Permanent	4/1au			
						Part 1	Temporary	4/1ax			
						Part 1	Temporary with permanent rights	4/1az			
						Part 1	Temporary with permanent rights	4/1ba			
						Part 1	Temporary with permanent rights	4/1bb			
						Part 1	Temporary with permanent rights	4/1bc			
						Part 1 & 3	Temporary with permanent rights	4/1bf			
						Part 1	Permanent	4/3a			
						Part 1	Temporary with permanent rights	4/3b			
						Part 1	Temporary with permanent rights	4/3c			
						Part 1	Temporary with permanent rights	4/3d			
						Part 1	Temporary with permanent rights	4/3e			
						Part 1	Temporary with permanent rights	4/3f			

						Part 1	Temporary with permanent rights	4/3g			
						Part 1	Temporary with permanent rights	4/3h			
						Part 1	Temporary with permanent rights	4/3i			
						Part 1	Temporary with permanent rights	4/3j			
						Part 1	Temporary with permanent rights	4/3k			
						Part 1	Temporary with permanent rights	4/3l			
						Part 1	Temporary with permanent rights	4/3m			
						Part 1	Temporary with permanent rights	4/3o			
						Part 1	Temporary with permanent rights	4/3p			
						Part 1	Permanent	4/3q			
						Part 1 & 3	Temporary	4/3r			
						Part 1	Temporary with permanent rights	4/3s			
						Part 1 & 3	Permanent	4/3t			
						Part 3	Temporary	4/3u			
						Part 1	Temporary	4/3v			
						Part 1	Permanent (excluding bridge and A45)	4/3w			
						Part 1	Temporary with permanent rights	4/3x			
						Part 1		4/3y			

						Part 1	Temporary with permanent rights	4/3z			
						Part 1	Permanent	4/3aa			
						Part 1	Permanent	4/3ab			
						Part 1	Temporary with permanent rights	4/3ac			
						Part 1	Permanent	4/3ae			
						Part 3	Temporary with permanent rights	4/3af			
						Part 1 & 3	Temporary with permanent rights	4/3ag			
						Part 1	Temporary	4/3aj			
						Part 1	Temporary with permanent rights	4/4g			
						Part 1	Temporary with permanent rights	4/4k			
						Part 1	Temporary with permanent rights	4/4w			
						Part 1	Temporary with permanent rights	4/6a			
						Part 1	Temporary with permanent rights	4/6b			
						Part 1	Temporary with permanent rights	4/6d			
						Part 1	Temporary with permanent rights	4/6e			
						Part 1	Temporary with permanent rights	4/6f			
						Part 1	Temporary with permanent rights	4/6g			
						Part 1	Temporary with permanent rights	4/6h			

						Part 1	Temporary with permanent rights	4/6n			
						Part 1	Temporary with permanent rights	4/6p			
						Part 1	Temporary with permanent rights	4/7a			
						Part 1	Temporary with permanent rights	4/8			
						Part 1	Permanent	4/9			
						Part 1	Temporary with permanent rights	4/10			
						Part 1	Temporary with permanent rights	4/11a			
						Part 1	Temporary with permanent rights	4/11b			
						Part 1	Temporary	4/25a			
						Part 1	Temporary with permanent rights	4/25b			
						Part 1	Temporary with permanent rights	4/25c			
						Part 1	Temporary	4/25d			
						Part 1	Temporary with permanent rights	4/25e			
						Part 1	Temporary with permanent rights	4/25f			
						Part 1	Temporary with permanent rights	4/25g			
						Part 1	Temporary with permanent rights	4/25h			
						Part 1	Permanent	4/25i			
						Part 1	Temporary with permanent rights	4/25j			

						Part 1	Temporary with permanent rights	4/25k			
						Part 1	Permanent	4/25l			
						Part 1	Temporary with permanent rights	4/25m			
						Part 1	Temporary with permanent rights	4/25n			
						Part 1	Temporary with permanent rights	4/25o			
						Part 1	Temporary with permanent rights	4/25p			
						Part 1	Temporary with permanent rights	4/25q			
						Part 1	Temporary with permanent rights	4/25r			
						Part 1	Permanent	4/25s			
						Part 1	Temporary with permanent rights	4/25t			
						Part 1	Temporary	4/25u			
						Part 1	Temporary with permanent rights	4/25v			
						Part 1	Temporary	4/25w			
						Part 1	Temporary with permanent rights	4/59			
						Part 1	Temporary with permanent rights	4/62			
						Part 1	Temporary with permanent rights	4/66			
						Part 1	Temporary with permanent rights	4/69			
						Part 1	Temporary with permanent rights	4/71			

						Part 1	Temporary with permanent rights	4/73			
						Part 1	Temporary with permanent rights	4/76			
						Part 1	Temporary with permanent rights	4/80			
						Part 1	Temporary with permanent rights	4/82			
						Part 1	Temporary with permanent rights	4/89			
						Part 1	Temporary with permanent rights	4/91			
						Part 1	Temporary with permanent rights	4/93			
						Part 1	Temporary with permanent rights	4/94			
						Part 1	Temporary with permanent rights	4/99			
						Part 1 & 3	Temporary with permanent rights	4/102			
						Part 1	Temporary with permanent rights	4/106			
						Part 1	Temporary with permanent rights	4/109			
						Part 1	Temporary with permanent rights	4/146			
						Part 1	Temporary	4/147			
						Part 1	Temporary with permanent rights	4/149			
						Part 1	Temporary with permanent rights	4/150			
						Part 1	Temporary with permanent rights	4/151			
						Part 1	Temporary with permanent rights	4/153			

						Part 1	Temporary with permanent rights	4/155			
						Part 1	Temporary with permanent rights	4/156			
						Part 1	Temporary with permanent rights	4/157			
						Part 1	Permanent	4/158			
						Part 1	Temporary with permanent rights	4/159			
						Part 1	Temporary with permanent rights	4/160			
						Part 1	Temporary with permanent rights	5/2a			
						Part 1	Permanent	5/2c			
						Part 1	Permanent	5/2d			
						Part 1	Permanent	5/2i			
						Part 1	Permanent	5/2k			
						Part 1	Permanent	5/2l			
						Part 1	Permanent	5/2m			
						Part 1	Permanent	5/2q			
						Part 1 & 3	Permanent	5/2r			
						Part 1	Permanent	5/2t			
						Part 1	Permanent	5/2u			
						Part 1	Permanent	5/2v			

						Part 1	Permanent	5/2w			
						Part 1	Permanent	5/2x			
						Part 1	Permanent	5/2y			
						Part 1	Permanent	5/2z			
						Part 1	Permanent	5/2aa			
						Part 1	Permanent	5/2ab			
						Part 1	Permanent	5/3			
						Part 1	Permanent	5/4			
						Part 1	Permanent	5/7			
						Part 1	Temporary with permanent rights	5/15a			
						Part 1	Permanent	5/15b			
						Part 1	Permanent	5/22b			
						Part 1	Permanent	5/25			
						Part 1	Permanent	5/26			
						Part 1	Permanent	5/27			
						Part 3	Permanent	5/29a			
						Part 1 & 3	Permanent	5/29b			
						Part 1 & 3	Temporary	5/29c			

						Part 1 Part 1 Part 1 & 3 Part 1 & 3 Part 1 & 3 Part 1 & 3 Part 3 Part 3	Temporary with permanent rights Permanent Temporary with permanent rights Permanent Permanent Permanent Permanent Temporary Permanent	5/29f 5/29h 5/29i 5/29l 5/29m 5/29o 5/29p 5/29q			
37	Solihull Metropolitan Borough Council (cont.)		RR-028	REP1-015	AoC-005	Part 1 & 3 Part 3 Part 1 & 3 Part 1 & 3 Part 1 & 3 Part 1 Part 1 Part 1 Part 3 Part 3 Part 1 Part 1	Temporary Permanent Temporary Temporary with permanent rights Permanent Permanent Permanent Temporary Permanent Temporary Permanent Permanent	5/29r 5/29s 5/29t 5/29u 5/29v 5/32 5/40 5/62 6/2a 6/2c 7/1b 7/1d	Yes		
38	DWF Law LLP on behalf of The Arden Hotel Limited		RR-011			Part 1 Part 1 Part 1 Part 3	Temporary with permanent rights Temporary Permanent Temporary with permanent rights	4/11a 4/11b 4/11c 4/102	Yes		

39	CPRE Warwickshire		RR-008			N/A	N/A	N/A	N/A		
40	Sport England		RR-029			N/A	N/A	N/A	N/A		
41	Health and Safety Executive		RR-015 AS-019			N/A	N/A	N/A	N/A		
42	BNP Paribas Real Estate on behalf of Royal Mail		RR-004			N/A	N/A	N/A	N/A		
44	NATS		AS-009			N/A	N/A	N/A	N/A		
46	Canal and River Trust		RR-006	REP1 -009		N/A	N/A	N/A	N/A		
47	Lydia Barnstable on behalf of Mr Heathcliffe Boswell (Haven Caravan Park)		RR-018			Part 1 Part 1 Part 1 Part 2	Permanent Temporary with permanent rights Temporary with permanent rights N/A	3/3a (subsoil) 3/23 (subsoil) 4/153 (subsoil) N/A	Yes		Lawrence Hugo Boswell (as executor of Lawrence Wilfred Boswell, in respect of Haven Park Caravan Site) – same party?

48	Birketts LLP on behalf of The Trustees of the Sir Major Timothy Gooch Will Trust		RR-002	REP1-007		Part 1	Temporary	2/3a	Yes		
						Part 1	Permanent	2/3b			
						Part 1	Temporary with permanent rights	2/3c			
						Part 1	Temporary	2/3d			
						Part 1	Permanent	2/3e			
						Part 1	Temporary	2/3g			
						Part 1	Temporary	2/3h			
						Part 1	Temporary	2/3i			
						Part 1	Temporary	2/3j			
						Part 1	Permanent	2/3k			
						Part 1	Permanent	2/3m			
						Part 1	Permanent	2/3n			
						Part 1	Temporary with permanent rights	2/3o			
						Part 1	Temporary	2/3p			
						Part 1	Permanent	2/3q			
						Part 1	Temporary	2/3r			
						Part 1	Permanent	2/3s			
						Part 1	Temporary with permanent rights	2/3u			
						Part 1	Permanent	2/3v			
						Part 1	Temporary	2/3w			
						Part 1	Permanent	2/3x			
						Part 1	Permanent	2/3y			
						Part 1	Temporary	2/3z			
						Part 1	Temporary with permanent rights	2/3aa			
						Part 1	Temporary	2/3ab			
						Part 1	Permanent	2/3ac			
						Part 1	Permanent	2/3ad			
						Part 1	Temporary with permanent rights	2/3ah			
						Part 1	Permanent	2/3al			
						Part 1	Permanent	2/3am			
						Part 1	Permanent	2/3ar			
						Part 1	Permanent	2/10g (subsoil)			
						Part 1	Permanent	2/10i (subsoil)			
						Part 1	Permanent	2/10j (subsoil)			
						Part 1	Temporary	2/11 (subsoil)			
						Part 1	Temporary	2/22 (subsoil)			
						Part 1	Temporary with permanent rights	2/29 (subsoil)			

						Part 1	Temporary with permanent rights	2/30 (subsoil)			
						Part 1	Permanent	2/33 (subsoil)			
						Part 1	Permanent	2/40 (subsoil)			
						Part 1	Temporary	2/52 (subsoil)			
						Part 1	Permanent	2/54 (subsoil)			
						Part 1	Temporary	2/59 (riparian)			
						Part 1	Permanent	2/60 (subsoil)			
						Part 1	Permanent	2/69 (subsoil)			
						Part 1	Permanent	2/70 (subsoil)			
						Part 1	Permanent	2/71 (subsoil)			
						Part 1	Permanent	3/3a (subsoil)			
						Part 1	Permanent	3/4a			
						Part 1	Temporary with permanent rights	3/4b			
						Part 1	Temporary with permanent rights	3/4f			
						Part 1	Permanent	3/4g			
						Part 3	Permanent	3/16			