Applicant's Responses to Deadline 5 Submissions and Other Requests for Information

The West Midlands Rail Freight Interchange Order 201X

Four Ashes Limited



## THE WEST MIDLANDS RAIL FREIGHT INTERCHANGE ORDER 201X

## APPLICANT'S RESPONSES TO DEADLINE 5 SUBMISSIONS AND OTHER REQUESTS FOR INFORMATION - DOCUMENT 16.1

- 1. This document sets out the Applicant's responses to other parties' submissions to the Examining Authority (ExA) made at Deadline 5.
- 2. No attempt has been made to respond to every single submission. The responses have focused on issues thought to be of most assistance to the ExA. Where points have been raised by various parties, the Applicant has responded only to one particular party, but the responses are applicable to all parties who have made the same point.
- 3. The Applicant also does not seek to respond to all the points made where the Applicant's response is already clearly contained within other submissions made since the Application was accepted, and wayfinds to previous submissions where appropriate, save for where it is considered helpful to repeat or cross refer to the information contained in the above documentation.

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## Responses to Deadline 5 Submissions

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
Statutory Bodies		
South Staffordshire District Council	ExQ2.2.1 (Need for the Proposed SRFI and Alternative Options)	
16.1.001	On the whole yes SSDC would agree [that WMRSS Phase 2 Revision Panel Report made a series of additional conclusions related to the provision of a Regional Logistics Site]; however the second bullet point wasn't as conclusive as stated above [i.e. "The closer that any warehousing or industry is to the rail terminal the better"]. The panel concluded at para 5.25 that 'clearly, the closer that any satellite or related warehousing or industry can be to the [rail] terminal, the better but from what we saw and heard all operate to a degree with related satellite facilities nearby. In such context we consider that the expectation that the full suggested 50 or more hectares should be on a single site is both unnecessary and unrealistic and would inhibit the proper recognition of potential elsewhere.'  Also bullet 4 [i.e. "A facility in Telford would be remote from the BC"] is missing some key words. Para 5.29 concludes that a facility in Telford would primarily serve	With regard to paragraph 5.25 of the WMRSS Phase 2 Revision Panel Report, the Applicant recognises the remainder of the paragraph highlighted by SSDC, however, SSDC is presumably not suggesting that it would be better to disperse warehousing away from the rail terminal at WMI so that more HGV traffic would be necessary on local roads to transport goods between the warehouses and the terminal (rather than containing those movements on estate roads within WMI).  The debate about the appropriate scale of SRFI has moved on since the Panel report. The Planning Act 2008 is clear that the threshold for modern day SRFIs is at least 60 Ha (section 26(3)(b)), while the NPS identifies at paragraph 2.55 that the national need will not be met by a series of smaller scale facilities.  With regard to paragraph 5.29, the Applicant recognises that the paragraph states that the Telford terminal would be remote from "some parts" of the Black Country. However, as noted in the ASA (APP-255) (page 39), the West Midlands Regional Logistics Study Stage One (2004) concluded that the existing rail terminal at

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	Telford itself together with Shropshire and be remote from <b>some parts</b> of the Black Country.	Telford "too peripheral location to attract any significant large-scale distribution development in the future".
	http://www.finham.org.uk/attachments/101_wmrsspha se2panelreport.pdf para 5.23-5.33	The distance between Telford and the Black Country is not the only shortcoming. The rail line serving Telford is below gauge W8 and, therefore, does not meet the minimum criteria for an SRFI set out in the NPS (paragraphs 4.85 and 4.89).
		See also the response from Network Rail at ExQ2.2.18 (REP5-058) which sets out that "Telford is on a W6a gauge route and cannot accommodate maritime containers except via a circuitous route via Shrewsbury, and even then only by using special 'pocket' or 'low floor' wagons for the standard 9'6" maritime container."
		Also see the response for Wolverhampton and Walsall Council's (REP5-044) at ExQ2.2.1, setting out "Apart from the site's remoteness from the major centres of population in the West Midlands, a major reason for this is that the rail connection faces west, towards Shrewsbury, away from the ports in the south and east of the country, as well as other logistics terminals, from where most traffic would originate. This means that travel distances by rail would be considerably longer than by road."
South Staffordshire District Council	ExQ2.2.5 (i) (Need for the Proposed SRFI and Alternative Options)	

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
16.1.002	The Issues and Options 2018 consultation does not specifically acknowledge unmet need for an SFRI to serve the Black Country and southern Staffordshire, as at the time of the consultation the WMI DCO was already in train. The Issues and Options simply identified the proposed SFRI under the Economic issues and challenges section, confirming the following:  3.11 Understanding the outcome of the West Midlands Interchange (WMI) proposal if permitted.  • This includes potential impacts on the local environment, as well as impact on infrastructure and housing requirements. If permitted, the scheme would increase the number of people coming into the district for work and therefore using the infrastructure network; or coming into the district to live, therefore increasing the pressure for additional housing.	It is apparent from the Paper that SSDC has no intention of addressing the outstanding need through the Local Plan review.  Paragraph 4.26 relies on the URS Study to asset that the "evidence prepared to date is still inconclusive as to whether or not an SRFI should be located within the district" notwithstanding that the council has agreed for the purposes of this examination that the URS study is inconsistent with the requirement within the NPS for SRFI to be close to the markets they serve.  The Paper recognises that WMI is now the subject of a DCO application and asks (rather than answers) the question "if granted approval, what implications will the SRFI proposal at Four Ashes have for the Local Plan Review?" (paragraphs 4.26 and 4.27 plus Question 15).  As set out in Applicant's Responses to Other Parties' Deadline 4 Submissions, Question IND11 SOC, Document 15.2 (REP5-006) the Applicant does not consider that the proposals would be likely to generate additional pressure for housing in South Staffordshire.
South Staffordshire District Council	ExQ2.2.14 (Need for the Proposed SRFI and Alternative Options)	
16.1.003	SSDC does not agree that including Four Ashes and	The Rail Report (APP-256) notes at paragraph 3.3.3 that:

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	Featherstone in the NR Forecast Report is recognition of the need for an SFRI in this location, as the NR Forecast Report is not a needs assessment. Such forecast modelling/reports will often include sites of varying levels of certainty, and their inclusion is not a guarantee that the development will happen (or is needed). Clearly the RLS issue has been present for a considerable number of years now, so it is unsurprising that it would be included in the forecast report.	"The forecasting process, as endorsed by the NPS, has taken account of the WMI proposals as part of the quantum of additional SRFI capacity expected to be developed over the next 30 years."  The Network Rail Freight Market Study 2013 notes in paragraph 1.21 that:  "Whilst the Freight Market Study uses the same assumptions as MDST [who undertook the background research] for the total area of rail connected warehousing sites for each forecast year, the Freight Market Study does not use the specific site assumptions used by MDST. As discussed in Appendix 2, the Freight Market Study groups the sites at a local level into regional clusters and only models freight flows to and from these clusters rather than to and from individual sites. This means that the Freight Market Study uses the same assumptions as MDST at a regional level, but not necessarily at the level of individual sites. This reflects uncertainty about the development of individual sites and avoids endorsing particular sites."  The statement in the Rail Report therefore reflects the position taken by Network Rail, in that the proposals in the location of WMI form part of the quantum for rail-served floorspace for the region, on which the national forecasts are based. Those forecasts are endorsed in the NPS (paragraph 2.49) and will not be achieved if the modelled SRFI (or equivalents) are not developed. See also Network Rail's response to EXQ2.2.10 (REP5-058).

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
South Staffordshire District Council	ExQ2.2.16 (Need for the Proposed SRFI and Alternative Options)	
16.1.004	The WM Rail Freight Strategy December 2016 acknowledges (at para 6.4.31) that several developers have aspirations for a SRFI in southern Staffordshire but is neutral as to a preferred location.  The strategy seems to suggest (at para 6.4.34) that independent consultants were commissioned to undertake a study to consider if there was a strategic case for an additional Intermodal Rail Freight Interchange (IRFI) terminal in the Black Country. The strategy states that the 'study assessed potential suitable sites and identified Bescot Yard as the most suitable location as a consequence of:	See the Applicant's 'Assessment of the West Midlands Freight Strategy' at (REP5-004 Appendix 2) which explains that the document strongly supports the development of freight infrastructure in the West Midlands, including in particular rail freight and acknowledges and supports the development of SRFI, including in south Staffordshire and the Black Country.  In REP5-058 Network Rail (owner of the Bescot site) has stated:  "Bescot Yard is not likely to be useable as a freight interchange, as it is about to see a sleeper manufacturing facility constructed on it. However the site will offer at least two lines for the purpose of recessing 775m trains, a point that has been raised separately in the DCO enquiry."
	<ul> <li>Connectivity to local and national road networks</li> <li>High levels of rail connectivity and accessibility to key markets and destinations</li> <li>Proximity to the Black Country providing accessibility to a critical mass of the predominately SME business</li> </ul>	It should also be noted in the Wolverhampton and Walsall Council's response to ExQ2.2.6 (REP5-044) that "the maximum potential area available at Bescot is only 10ha" – a size of site that would not be suitable for a SRFI.
	sectors which are likely to use intermodal rail freight as well as Darlaston Enterprise Zone - Electrification of Bescot Yard in reference to DfT	

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	proposals for the electric freight spine, and - Strategic location on the national rail network and associated rail connectivity to markets  The BC Gateway and Walsall-Stourbridge Freight Line Study December 2012 also confirms that a high level assessment identified Bescot Yard as having the most suitable characteristics for a IRFT (para E3).	
South Staffordshire District Council 16.1.005	ExQ2.3.3 (Green Belt)  Thank you for the opportunity to clarify our position, it is correct that we consider that purposes 2 and 5 are also engaged and are relevant as per our response to Q1.3.3 in the previous round of questions.	The Applicant also noted the inconsistency in SSDC's previous responses. The analysis in SSDC's Local Impact Report at paragraph 6.3.7 is a more considered and objective assessment, which coincides with the Applicant's own assessment.  Whilst the Council have now confirmed that they consider that WMI would conflict with the second purpose of the Green Belt (i.e. to prevent neighbouring towns merging into one another) the Local Impact Report submitted at Dead Line 2 states that "The application site is contained within boundaries that are largely framed by strategic roads that comprise the M6 Motorway (to the east), the A5 (to the north) and the A449 (to the west). The site is adjacent to the Four Ashes industrial estate as described above. The West Midlands conurbation is located approximately 6 miles to the south and Cannock is located about 3 miles to the east. The

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		village of Penkridge is located about 1 mile to the north of the site. Given this geography, the proposal would not give rise to a merging of towns." (para 6.3.3)
		In addition, with regards to the fifth purpose of the Green Belt (to assist in urban regeneration, by encouraging the recycling of derelict and other urban land), the Local Impact Report states that "The National Networks National Policy Statement (NNNPS) makes it clear that the particular locational criteria that define Strategic Rail Freight Interchanges (SRFIs) mean that it is extremely unlikely (almost impossible) to find a suitable site for an SRFI within large built up areas. For this reason it would be difficult to assert that the location of the WMI site would deny an opportunity to recycle derelict and urban land within the conurbation (or indeed land within neighbouring towns/villages). For this reason the proposal would not harm urban regeneration and therefore this Green Belt purpose is not engaged." (para 6.3.6)
		The Council's Local Impact Report was reported to and approved by the Overview and Scrutiny Committee on 28 March 2019. The minutes to this meeting state that "the Overview and Scrutiny Committee support the Cabinet Member (Planning and Business Enterprises) proposed decision to submit the following three key documents to the Examining Authority with such amends that the Cabinet Member deems necessary to take into account members views", this included "A Local Impact Report which has been

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		prepared in accordance with PINS Guidance and as requested by the Examining Authority".
		Whilst it is now understood that SSDC consider the above text from the Local Impact Report to be incorrect, this text is consistent with the Applicant's assessment.
		A summary of the Applicant's case regarding the Green Belt is set in Appendix 2 to the Applicant's Post Hearing Submissions (CAH, ISH 2 and ISH3) at Section 2 (REP4-004), and at Chapters 5, 6 16 and 17 of the Planning Statement (APP-252) and the Update on Green Belt issues provided at Deadline 2 (Appendix 3, REP2-009).
		The Applicant's response to ExQ1.3.4 explained clearly why Green Belt purposes relating to the separation of settlements are not engaged by the location and geography of WMI.
		In relation to the 'urban regeneration' purpose, the evidence has established that there is no urban capacity available to meet the need for a SRFI and that a SRFI developed at Four Ashes would provide an important service to the manufacturing and wider economy of the Black Country, whilst also making a meaningful contribution to its employment needs.
South Staffordshire District Council	ExQ2.15.1 (Draft Development Consent Order)	

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
16.1.006	The Council's comments were made at the hearing in June and the Council's position remains the same:  • Paragraph 3- we remain concerned that this is not compliant with the relevant policy. The key here is that the policy is about the provision of a rail freight interchange with that rail connection.  • Paragraph 4 – we remain concerned that this allows a large amount of leeway to move away from the commitment to provide a rail connection – we would expect this to be limited to force majeure style circumstances and for there to be an additional limit on any further development of warehousing until the connection is in place should the requirement in condition 3 not be met.  • Paragraph 7 – we consider that the appointment of the co-ordinator should be within 6 months of the consent to the Order and not simply prior to commencement as a large amount of the co-coordinator's work needs to take place sometime before commencement.	Please see the Applicant's Post Hearing Submissions for ISH 5 (Security for Delivery of the Rail Terminal – Appendix 4) Document 16.2) and the Applicant's Post Hearing Submissions for ISH 6 in relation to Schedule 2 Part 2 (Document 16.3).
Staffordshire County Council	ExQ2.1.1 (iii) (Planning Policy)	

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
16.1.007	Loss of reserves/ production capacity  The appellant's Mineral Resources Statement (MRS) indicates that the proposal would result in the loss of 985,000 tonnes of sand and gravel within the area allocated for mineral extraction in the Minerals Local Plan for Staffordshire (refer to inset map 7 for Calf Heath in the appendices).  The MRS also assess that an additional 2,730,000 tonnes of sand and gravel would be lost within that part of the DCO site that is situated within a mineral safeguarding area. The total reserves lost amount to nearly 75% of the annual provision for sand and gravel in the county i.e. 5 million tonnes per annum (refer to policy 1 of the MLP).  The proposal would also result in the loss of a safeguarded mineral infrastructure site i.e. Calf Heath Quarry, which is capable of producing 100,000 to 150,000 tonnes per annum (refer to delegated report for SS.12/08/681 MW) which amounts to 2 to 3% of the county's planned annual provision for sand and gravel.	Loss of reserves / production capacity  As requested by SCC, the Applicant provided an estimate of the total sand and gravel that may be present within the Order Limits. It should be noted that no indication is provided as to the feasibility of extraction of all of this material.  The Minerals Safeguarding Area (MSA) only covers part of the Order Limits. Of the additional 2,730,000 tonnes of sand and gravel estimated as being within the Order Limits, only 1,210,000 tonnes is within the MSA (with 1,520,000 tonnes falling outside the MSA). A plan provided by SCC showing the extent of the MSA is provided at Appendix 1.  Of the 36,850,000 million tonnes allocated in the MLP period from 2015-2030, the additional 1,210,000 tonnes within the Order Limits and MSA (which is not allocated in the MLP) represents the equivalent of around an additional 3% for the plan period – however, as set out above, there is no indication of the feasibility of the extraction of this material. Given the extent of SCC within the MSA, it is anticipated that sufficient alternative reserves existing within the County.
	sounty a planning annual provision for band and gravel.	With regard to the existing minerals infrastructure, Policy 3 of the MLP is clear that if the benefits of the non-mineral development would outweigh the material benefits of the minerals infrastructure, then permission can be granted. The mineral infrastructure on the

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		site is directly linked to the existing quarry activities and it will not be sustainable or viable to operate the plant in that location once these quarrying activities cease on the site.
	Market area for quarry	The market area for the Quarry
	The site's location provides good access to markets for construction aggregates in Staffordshire, Shropshire and the Black Country.	The MLP states that sand and gravel is usually used locally (i.e. within a 27-mile radius of a site). There are two non-operational sand and gravel quarries are located within 2.5 miles of the site (refer to Figure 1 of the MLP) which could supply sites which are currently served by Calf Heath Quarry, if necessary.
	Other sites in area that could meet shortfall	Other sites in the area that could meet the shortfall
	See attached plan.  In 2018, there were 4 operational quarries in the South Staffordshire District including Calf Heath Quarry. One of those quarries (Seisdon to the west Wolverhampton is due to close in 2019 and is to be replaced by another quarry at Shipley in Shropshire).  The plan also shows 3 non-operational quarries within South Staffordshire District which have been dormant for a long time and there is no indication as to if and when those quarries might re-commence mineral	As noted in SCC's response, there are a number of existing quarries local to Calf Heath, and that other quarries could meet the shortfall.

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	Another quarry to the west of Penkridge and located in Shropshire (Woodcote Wood off the A41) has recently commenced mineral extraction.	
	The operator of Calf Heath Quarry operates other quarries in Shropshire (Gonsal to the south of Shrewsbury/ Bridgwalton near Bridgnorth) and a quarry in Worcestershire (Wildmoor Quarry near Bromsgrove) but does not operate any other quarries in Staffordshire.	
	It would be anticipated that the operator seeks to meet the shortfall in supply from its remaining operations but it would be expected that other operators would find opportunity to meet that shortfall. In this matter, note that the average aggregates delivery distance by road is 27.0 miles (refer to table 2 of the Mineral Product Association's "2018 Sustainable Development Report").	
	Potential implications for the MLP  Assuming that existing quarries meet the shortfall in production, the loss of Calf Heath Quarry is likely to result in an earlier depletion of remaining reserves near to markets in the West Midlands conurbation and	Potential implications for the MLP  As noted by SCC in their response, in the event of a shortfall, this could be addressed through an update to the MLP.

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	Staffordshire. Depletion of sand and gravel reserves will be monitored as part of preparing the Local Aggregate Assessment (refer to paragraph 207 a of the National Planning Policy Framework) and any shortfall would have to be addressed with an update to the Minerals Local Plan.	The MSA covers a significant area in the County, with other sites for sand and gravel expected to be available should a shortfall occur.
Staffordshire County Council	ExQ2.15.1 (Draft Development Consent Order)	
Council	(i) In relation to Part 2:	Please see the Applicant's Post Hearing Submissions for ISH 5
16.1.008	- The applicant has suggested that it is their intention to deliver the terminal as soon as possible in the development and that the Rail Infrastructure provisions are a fall-back position. There are clear benefits both in terms of the satisfying the objectives of the NPSNN and to the local area by the early delivery of the terminal. Should the applicant be unable to deliver the terminal by the points set out in Rail Infrastructure sections (a) or (b) due to matters demonstrably outside of their control it is then proposed that the restrictions be disapplied and the terminal be delivered as soon as reasonably practicable. However, with this approach there is no level of surety as to when the terminal will be delivered or whether the applicant is progressing as expeditiously as possible. It is suggested that in order to demonstrate the has been a delay outside of their	(Security for Delivery of the Rail Terminal – Appendix 4) Document 16.2) and the Applicant's Post Hearing Submissions for ISH 6 in relation to Schedule 2 Part 2 (Document 16.3).

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	control the applicant will have to identify the source of the problem; why it occurred; what they attempted to resolve the matter and whether it has been; and the current status of the project. In this it should therefore be reasonably possible to define a timeframe/timetable for completion of the terminal works rather than leaving it open ended.	
	- There is a discrepancy in the provision of Rail Support against the Rail Provision Milestones. The Rail Freight Co-ordinator is supposed to report back quarterly on progress towards the milestones. The first milestone is the submission of an application for GRIP 3 to Network Rail prior to commencement yet the trigger for the provision of the Rail Freight Co-ordinator is also prior to commencement. It follows therefore the coordinator would not be able to update on progress towards the first milestone with the current drafting. It is suggested that the trigger for appointment of the Rail Freight Co-ordinator is tied to point in time following the grant of consent (suggest within 6 months) to allow them to realistically influence and report on progress towards milestone one.	
Canal and River Trust	ExQ2.13.3 (Recreation and Leisure Activity)	

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
16.1.009	There appear not to be specific user types that are categorised when assessing noise impacts, and thus no definition of transient, or alternative classifications from which to choose. However, given the information provided previously by the Trust and contained in our statement of common ground in relation to moorings and boat usage along the whole stretch of canal through the extent of the order limits, transient does not appear to be an entirely appropriate classification.  We consider that the potential quantity, length and nature of stays, both daytime and overnight, are likely to be such that usage would be greater than just transient.  The Trust can confirm that the annual licenses for the leisure moorings can be renewed by the licence holder and often are, often for many successive years. In respond to the second part of the ExA's question, the Trust do not consider that such users should be considered transient.	The Applicant has addressed this point in its response to ExQ2 12.13.3 and in Section 7 of its Deadline 4 submission (Document 14.1, Appendix 12, REP4-008).  The categories of receptor types are contained in Table 13.5 in Chapter 13 of the ES ([Document 6.2, APP-046)].
Canal and River Trust	ExQ2.13.4 (Recreation and Leisure Activity)	
16.1.010	The GI parameters plan (4049-1050 Rev7) gives the heights of the bunding relative to the adjoining	The GI Parameters Plan (Document 2.7) (REP5-019) and the Floor Levels and Building Heights Parameter Plan (Document 2.6) (AS-

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	development zone's finished floor levels as shown on the floor levels and heights plan (2049-1040 Rev 6). The FFL plan gives a 0.5m vertical deviation allowance as well as a 1500mm range of FFLs. Thus, it also appears that the given heights could vary up to 2.5m.	057) taken together detail the relevant parameters relating to the heights and levels of the proposed buildings and mounding. This includes the extent of any ranges and/or deviations in the heights and levels.
	It also gives a maximum building height of 20m, also yet to be confirmed, and not until after the DCO application is completed.	The maximum vertical deviation for finished floor levels is 2.0m, while the 0.5m vertical deviation refers to the carriageway finished levels.
	However, it also includes a note referring to the mounding 'to the eastern side of the canal', which is undefined on the plan. It suggests that this bund height would be set relative to the road levels. The road levels are shown on the plan and have a note that there is a 0.5m vertical deviation applied to them. Further, there are varying heights noted on the bund west of the spine road, and thus it is unclear as to how much of this bund the text would apply.	The GI Parameters Plan details the extent and the heights of the proposed mounding relative to the adjoining development zone. The single exception to this is the proposed mounding that extends broadly north-south, immediately to the east of the canal and west of the proposed link road. The height of this proposed mound is relative to the height of the proposed link road. This was considered to be more appropriate than linking the height of this particular mound to the development zones that lie to the east of the link road.
	No cross-sections appear to have been provided to demonstrate how these heights relative to the canal corridor. The road heights do seem to be indicated, but not in relation to the bunds or other matters to which these relate.	For clarity, the Note on the GI Parameters Plan referring to the 'mounding to the eastern side of the canal' is to the full length of the proposed mounding situated between the eastern side of the canal and the link road and extending between the A5 to the north and the proposed link road canal crossing to the south.
	Therefore, it is difficult for the Trust to assess the potential impacts, or even the potential maximum and	

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	minimum impacts, on the canal corridor of the bunds in visual terms. We suggest that a min and max section E-W across the site showing the canal, bund, road heights and development zone FFL and max building height would assist greatly.	Illustrative Landscape Cross Sections C-CC and N-NN at Document 6.2; ES Figure 12.12 (APP-044) show the height of the proposed mounding and nearest buildings relative to the canal.
	These bunds form a visual and noise buffer to the canal corridor. It is therefore of importance to the Trust that they are implemented early, ahead of other developments, in order that they fulfil their function adequately during construction as well as operation; but also important that they do not become greater in height than is necessary to screen future development, in order that they do not result in visual intrusion.	Collectively, the details relating to the extents, heights and levels of the proposed mounding and buildings (as detailed on Documents 2.6 and 2.7), in conjunction with the Illustrative GI Plan (Doc 6.2; ES Figure 12.11 (APP-044)), Illustrative Landscape Cross Sections (Figure 12.12) and relevant Photomontages (Figure 12.13, APP-045) should provide sufficient information and detail to enable the likely visual effects of the proposed development upon users of the canal to be understood and assessed.
	There needs to be a mechanism within the DCO process where this sequence of events can be accommodated in relative terms, in order to allay any concerns that we may have. This requires further information on the potential visual impact of the bunds, and also on their benefit for screening construction and operational noise from the canal corridor. It may be	The proposed heights of the mounding has been carefully and comprehensively appraised as part of the design process. This has included consideration of the effects of these features upon surrounding receptors, including users of the canal. The proposals adopt an appropriate balance in achieving effective mitigation without the mounding being greater in height than desirable or necessary.
	necessary that the DCO sets out that once the bund heights are set, FFL and building height maximums are also set relatively, although there must also be other mechanisms for addressing this point.	There is a preference to construct bunds as early as possible (as per paragraph 12.143 of the ES (Document 6.2, APP-032)). However, it is not possible to provide a fixed programme for the construction of the bunds, since a number of other factors will need to be considered as further detail emerges; for example, the

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		earthworks strategy. The bunds will require material from the development plots.  The timing of the installation of landscaped bunds is controlled by DCO Requirement 2(1)(g) (REP5-008); under this Requirement, the phasing/timing of the bunds must be agreed by the local planning authority, and therefore the environmental benefit of such features can be maximised, while taking account of any reasonable constraints as they are identified at that time.
City of Wolverhampton and Walsall Council 16.1.011	ExQ2.7.1 (Air Quality and AQMA)  In part this concerns a predicted exceedance of the daily mean PM10 air quality objective at receptor point 7a, front façade of the western corner of 343 Darlaston Road in Walsall. Walsall Council is unsure as to the specific rationale as to why this receptor location is used in context of the proposed development.	This receptor is used in the assessment of the potential air quality impacts of the proposed development as it is close to a road where the traffic from the development exceeds the screening thresholds set out in the second bullet point of Paragraph 7.91 of the ES Chapter 7 (Document 6.2, APP-027) and therefore was considered further in the air quality assessment. As noted in Walsall Council's response, the assessment approach which has been undertaken is a conservative one in accordance with the requirement to undertake a reasonable worst-case assessment. The Applicant notes that Walsall Council agree that the impacts of the proposed development are negligible at Receptor 7a and that no mitigation is required.

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		In terms of the UK Plan for tackling Nitrogen Dioxide Roadside Concentrations, as mentioned by Walsall Council, the referenced Black Country Targeted Feasibility Study confirms that in relation to the A454/M6 Junction10 that the relevant road section is the A454 west of the junction. Compliance is predicted to be achieved by 2021 which is the modelled opening year of the proposed development. Development traffic on this road link is below the relevant screening threshold for an assessment to be necessary in accordance with the second bullet point of Paragraph 7.91 of the ES Chapter 7 (Document 6.2, APP-027).
Highways England	Covering Letter	
16.1.012	Site Drainage	Site Drainage
	As agreed with the applicant at Deadline No. 4 we have supplied details of the highway drainage system held in our "HA DDMS" database of drainage assets. A screen shot image overleaf indicates the records held and identifies the A449 culvert, which the applicant has challenged the ownership of, to be a Highways England controlled asset. On this basis we reiterate our previously stated view that DfT Circular 02/2013 paragraph 50 applies with no connection between the highway and site drainage systems permitted. As such we require the draft DCO to be updated with an	Please see the Applicant's Post Hearing Submissions in respect of ISH 6 (Document 16.3).

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	amendment to Works No. 7 sub-paragraph (s) to reference the provision of a new culvert in this location independent of the highway drainage system.	
	Landscaping Design	Landscaping Design
	We have received a further set of landscape design drawings from the applicant of site landscaping adjacent to the SRN. These are subject to review. When this review is completed, we shall advise the applicant and ExA of the outcome.	The Applicant submitted the landscape design drawings to HE on 29 May 2019. These drawings demonstrated that there would be no vertical obstruction to the SRN arising from landscaping or bunding proposed to be provided within the Development and the Applicant understood that they satisfied HE, however a confirmatory response is awaited.
	Road Safety Audit	Road Safety Audit
	We are currently reviewing the latest road safety audit information provided by the applicant in respect of issues identified at M6 junction 12 by the initial audit work. When this review is completed, we shall advise the applicant and ExA of the outcome.	The Applicant believes that the further information submitted confirms that no additional mitigation is required. A response is awaited.
	Rail Terminal	Rail Terminal
	The applicant has recently provided further information that seeks to analyse the traffic implications of not having an active terminal in operation post the proposed cap on development floor space of 187,000	Following further discussions with HE, the Applicant has concluded that there is no prospect of undertaking an assessment of the impact of a deferred terminal of the extent desired by HE during the course of the Examination. Accordingly, the Applicant has

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	sq.m before this occurs. We are carefully considering this new information and its implications for the SRN. We shall advise the applicant and ExA of the outcome of this review.	added some wording to paragraph 4 of Part 2 of Schedule 2 of the dDCO submitted for Deadline 6 to provide that HE's consent is required before any relaxation can be given by the local planning authority. This is following receipt from HE of a precedent in another DCO, currently undergoing Examination, whereby it had been accepted that an approval pursuant to particular requirement should be subject to HE's consent. The amended wording in the WMI DCO is different but follows the same principle.
	Requirement for timing of rail terminal delivery	Requirement for timing of rail terminal delivery
	The applicant has agreed in principle that any amendment to the requirement setting out the timing of delivery of the rail terminal would be subject to consultation and agreement by both Staffordshire District Council and highways England. We agree that this is an appropriate approach and look forward to confirming this on review of the next draft DCO.	The Applicant agreed to require the District Council to consult with HE and SCC and the requisite amendment was made to the dDCO submitted at Deadline 5. The Applicant would refer to paragraph 4.9 of the NPSNN, which confirms that guidance applicable to planning conditions is applicable to requirements. Such guidance is to the effect that, whilst the local planning authority can consult others, it should be the sole decision maker.
	Amendment to existing TROs	Amendment to existing TROs
	We have agreed in principle that the question of verge parking on the SRN in the vicinity of the site can be dealt with by way of variation to the esiting clearway Traffic Regulation Orders as opposed to the making of new Orders. HE agree that this is an appropriate	The necessary amendments were made to Schedule 9 of the dDCO submitted at Deadline 5.

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	approach and look forward to confirming this on review of the next draft dDCO.	
Greensforge Sailing Club 16.1.013	ExQ2.13.5 (Recreation and Leisure Activity)  Response to ExQ2.13.5 on behalf of Greensforge Sailing Club.	Please see <b>Appendix 2</b> "Applicant Response to Greensforge Sailing Club".
Stop the WMI Group	ExQ2.13.6 (Rcreation and Leisure Activity)	
16.1.014	Group Response: It would appear that there is a typo in our heading and Wharf lane should read Croft Lane.  Since writing our reports the new landowner has advised that the licence was not renewed but was then used as a CL (certified location) site.  "A certified location (or 'CL') is an informal privately owned caravan site for up to 5 caravans in the United Kingdom. Visitors with caravans pay a small fee to the	Certificated Locations are permitted to accommodate up to 5 caravans or motorhomes, and 10 tents for a maximum of 28 consecutive days at any one time. Certified Locations do not require planning consent but have to be certified by an organisation (such as the Caravan Club or the Camping and Caravan Club).  Since the Stop WMI Group has confirmed that the formerly certified camp site on land off Croft Lane is no longer certified, the Applicant does not consider it to be a valid receptor for inclusion in the noise assessment. The other certified camp site locations in the Gailey
	CL owner in order to pitch overnight. This is usually cheaper than larger commercial caravan sites."  We are unsure of the new landowners intentions for the site therefore, although it was a well used caravan	<ul> <li>area are listed on the Caravan and Motorhome Club as:</li> <li>5 Hordern Lodge, Hordern Park, Ball Lane, Coven Heath, Wolverhampton WV10 7HD, which is approximately 3.4km to the south of the Station Drive/A449 junction; and</li> </ul>

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	tourer site, we can no longer confirm that it is. However there are still certified locations within the Gailey area: <a href="https://www.caravanclub.co.uk/certificatedlocations/england/staffordshire/gailey/">https://www.caravanclub.co.uk/certificatedlocations/england/staffordshire/gailey/</a> "Lying close to the towns of Cannock and Penkridge, Gailey makes a perfect base for exploring the beautiful woodlands of Cannock Chase. It also lies just north of the West Midlands metropolitan area, with Birmingham easily in reach.  Local features include dining at the village's Spread Eagle Pub, while Gailey Wharf on the Staffordshire and Worcestershire Canal offers a chance to enjoy a walk along the towpath or ride on a barge.  Just north of the village lies Rodbaston Animal Zone, offering a great family day out. With everything from meerkats to monkeys, it is home to more than 750 animals and has extensive family picnic areas, plus a tea room."  The impact of this development would make this a less attractive area to visit given the description above and could have an impact on all of these local businesses.	Streetway House, Watling Street, Stafford ST19 9LN, which is approximately 2.8km to the west of Gailey roundabout.  Neither of these camp sites are close enough to the scheme to be adversely affected

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
Stop the WMI Group	ExQ2.9.1 (Ecology and Nature Conservation)	
16.1.015	FEMMP paragraph 3.3.3 addresses Ecologically 'Important' hedgerows.  Group Response: A recent study reported by the BBC (27th June 2019) by Dr Jeremy Froidevaux from the University of Bristol states that leaving hedgerows untouched can offer an important lifeline for night-time biodiversity, such as bats.  A study says schemes designed to make farming more wildlife-friendly often failed to offer any real benefits. Populations of insect-eating bats crashed throughout Western Europe during the late 20th Century. https://www.bbc.co.uk/news/science-environment-48747587  This strongly suggests that hedgerow disturbance, dismantling, removal and translocation (and, furthermore, the time taken for it to become reestablished) will still be detrimental to many populations of wildlife (particularly bats) so should not be implemented.	An assessment of the effects of the proposed development on hedgerows and the species supported by these habitats is within ES Chapter 10 Ecology and Nature Conservation (Document 6.2, APP-030).  The mitigation proposed as identified in the ES and as secured via the FEMMP (Document 6.2, ES Technical Appendix 10.4, REP5-033) has been agreed with NE and SCC. The Statement of Common Ground agreed with NE (REP1-003) states: "FAL and NE agree that ecological enhancement measures are outlined in the final ES, which will have a positive effect on biodiversity and accord with relevant guidance".  The Addendum to the Statement of Common Ground with SCC (REP5-039) states that: "The updated FEMMP is acceptable and the proposed Ecological Mitigation and Management Plan (EMMPs) for each phase of development comprises an appropriate mechanism for securing ecological enhancement and mitigation" and "the Applicant has agreed to make a financial contribution towards works to improve off-site local wildlife sites. The details of this contribution are included in the latest version of the s.106 Agreement and are agreed in principle. Based on this contribution and taking account of the ecological mitigation measures proposed in the FEMMP (which comprise proposed on-

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		site ecological enhancement and off-site farmland bird mitigation), the package of ecological mitigation measures are acceptable".
Stop the WMI Group	ExQ2.9.1 (Ecology and Nature Conservation)	
16.1.016	FEMMP paragraph 3.3.5 addresses felling part of Calf Heath Wood.  Group Response: Removal of such a significant proportion of the wood results in habitat fragmentation in the area, resulting in isolating populations of the less mobile species such as invertebrates and amphibians. Furthermore, targeting the "less biodiverse part of the wood" reduces the habitat mosaic of the wood, resulting in a homogenised area of woodland with little variety in the range of niches and available for the species there.	As secured via the FEMMP (Document 6.2, ES Technical Appendix 10.4, REP5-033), the retained area of Calf Heath Wood will be put into active management to promote a diverse woodland. The wood will be enhanced by restoring the coniferous or mixed plantation areas (reducing proportion of pines) to native broadleaved woodland (e.g. oak, birch and ash) over time through appropriate silvicultural practices. Non-native species notably rhododendron will be removed over several years in a phased manner that promotes the native shrub layer. Areas of standing deadwood would be retained. The retained area of Calf Heath Wood will link to other Green Infrastructure for example the ecological corridor to the reservoir to the east, to Croft Lane Community Park to the north and a corridor to the south linking with Calf Heath Community Park. Where the Green Infrastructure is crossed with roads, bat hopovers and wildlife crossings are provided. These measures are shown on the Green Infrastructure Parameters Plan (AS-062).  In the operational phase of the proposed development the habitats (created in the construction phase) for the benefit of invertebrates would lead to an improvement in habitat interest and value for

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		invertebrates resulting in a long term, beneficial effect significant at the Local scale (given the dominant arable and improved grassland habitats in the landscape). The habitats to be provided in the Community Parks and in ecological corridors are of value as a foraging resource for invertebrates such as extensive areas of woodland, rough grassland/wildflower meadow, standing deadwood, ponds and deadwood (standing and log piles).
		Mitigation has been embedded to allow amphibians to move through the Site, namely the provision of ecological corridors linking new and retained habitats, specification of amphibian friendly gully pots, ladders and amphibian wildlife kerbs across the Site to prevent trapping amphibians and wildlife crossings at interfaces of roads and key areas of blue / green infrastructure. These measures are designed to allow the movement and dispersal of amphibians throughout the Site and promote population growth.
		Wildlife crossings and mammal tunnels (as illustrated in the Green Infrastructure Parameters Plan, AS-062) are specified within the proposed development to provide connectivity between community parks and other areas of created and retained habitat.
Stop the WMI Group	ExQ2.9.1 (Ecology and Nature Conservation)	
16.1.017		

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	FEMMP paragraph 3.5.1 addresses created habitat areas.  Group Response: The wildlife corridor is a useful feature, but are Calf Heath Wood and Calf Heath Reservoir also linked by wildlife corridors to other nearby important habitats? Absence of other such corridors creates an "island effect" where less-mobile species inside the development area cannot access important habitat in surrounding areas.  Provision of corridors to facilitate the movement of wildlife from the development area to surrounding areas is important because the existing major roads and motorway in the area already provide significant access restrictions.	Potential barriers such as the M6, the A5 and the A449 are already present in the baseline scenario, with limited interchange of species noted between the Site and off-site habitats beyond these roads.  The Green Infrastructure shown on the Green Infrastructure Plan – Parameters Plan (AS-062) provides species rich, connected and ecologically functional habitats. Off-site habitat connectivity has focused on the canal corridor and habitats to the south. In addition to on-site habitat enhancements a financial contribution (secured via s106) has been agreed, which could potentially enhance and manage nearby habitats (for example a degraded local wildlife site) to the south of the site along the Saredon Brook.
Stop the WMI Group 16.1.018	ExQ2.9.1 (Ecology and Nature Conservation)  FEMMP paragraphs 3.7.20-25 addresses the	Natural England have issued a Letter of No Impediment
10.1.016	European Protected Species Mitigation Licence (EPSML) from Natural England (NE).  Group Response: A significant number of bat roosts are being completely removed from the area, only to be replaced by bat	(Document 6.2, ES Technical Appendix 10.5, APP-091) which states on page 1: "Natural England sees no impediment to a licence being issued, should the DCO be granted" and "Based on the current level of bat activity on site, the proposals are considered to maintain the Favourable Conservation Status (FCS) of the bat assemblage and populations present on site".

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	Research strongly indicates that provision of bat boxes as a replacement for natural and/or established roosts tends to lead to disturbance-tolerant species becoming more prevalent, with less tolerant species becoming rarer (or disappearing altogether). Indeed, more research needs to be carried out on the insulating properties of bat boxes compared to established building roosts and tree roosts. Personal experience suggests that, in certain scenarios, bat boxes are not a suitable replacement for established building roosts	The mitigation scheme detailed within the FEMMP (Document 6.2, ES Technical Appendix 10.4, REP5-033) includes fewer bat boxes than originally proposed by the applicant in response to Natural England's comment within the Letter of No Impediment that over use of bat boxes may change the species present.
Stop the WMI Group	ExQ2.9.1 (Ecology and Nature Conservation)	
16.1.019	FEMMP 3.7.26 Construction activity that creates noise, vibration or emits light within 30m of known roosts, hedgerows and woodland will cease at sunset between the period March to September inclusive when bats are active, if not before, to avoid delaying the emergence of locally roosting bats. Construction activity will not commence again until after sunrise to ensure that impacts to bats returning to local roosts does not occur."	The mitigation proposed in Paragraph 3.7.26 of the FEMMP (Document 6.2, ES Technical Appendix 10.4, REP5-033) as quoted is required in the construction phase only, prior to mitigation measures for the operational phase being constructed/implemented. Once these mitigation measures are implemented and in place, for example vegetated landscaping bunds, sensitive operational lighting design, strategic planting and fencing the quoted construction mitigation measures would no longer be necessary.

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	<b>Group Response:</b> A suitable mitigation plan, but could it also be said that any sort of potentially-disruptive work will also be refrained from during the same time windows if the WMI becomes operational?	
Stop the WMI Group	ExQ2.9.1 (Ecology and Nature Conservation)	
16.1.020	FEMMP paragraph 3.7.27 addresses Bat 'hop-over' habitat features.  Group Response: Bat hopovers are a potentially-beneficial feature under the circumstances, but in deterring certain species of bats from flying across roads, does it not effectively create habitat fragmentation – a measure that bat hopovers have been introduced to at least partially prevent?	The hop-overs are in place to aid low flying bats to safely cross the road ensuring that they cross at a height above any potential traffic collision zone which they may otherwise do in the absence of mitigation. These measures assist ecological connectivity and do not create habitat fragmentation.
Stop the WMI Group	ExQ2.9.1 (Ecology and Nature Conservation)	
16.1.021	<b>FEMMP paragraphs 3.7.42-43</b> address the protection of hedgehogs.	Wildlife crossings are proposed in areas where the green infrastructure is dissected by roads, these are the locations where the risk of collision is considered greatest for mammals and
	<b>Group Response:</b> Hedgehogs are particularly susceptible to roadkill by traffic on the proposed roads around the site, particularly as a result of the increased volume and size of vehicles involved.	amphibians. The locations of these measures are shown on Green Infrastructure Plan – Parameters Plan (AS-062).

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	It would surely be prudent to introduce a more complex network of tunnels under the development site to allow safe transit of hedgehogs (as well as certain amphibian species*), as with the larger mammals, mentioned earlier on in the report.  • *Toads, particularly, will migrate several kilometres to	
	breed, and as a result of this are very susceptible to roadkill during their migration to breed. <a href="https://ptes.org/grants/uk-mammal-projects/roadtunnels-wildlife/">https://ptes.org/grants/uk-mammal-projects/roadtunnels-wildlife/</a>	
	Further to the above, the magnitude of the proposed construction still presents a serious barrier in an important wildlife transition area that is already heavily restricted by existing major roads. Surely no development at all would be far more beneficial for the health and well-being of ALL species which reside in the area, rather than just considering a minority of the humans that are present.	
Stop the WMI Group 16.1.022	Technical Note: Prepared on behalf of Stop the WMI	

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	Milestone Technical Note: - Response to a Request for Information Relating to Highway Matters from the Examining Authority	
		The Applicant has not responded to each individual point raised within the Note. The Applicant has identified the key themes raised by the Note and responds to these.
	i) Need for and locational requirements for SRFI (para's 2.42 – 2.58 of the NPS)	i) The Milestone Note does not deal with the locational requirements from the transport perspective of SRFI as requested by the ExA. Specifically, no mention is made of paragraph 2.56 of the NPS which states inter alia "It is important that SRFIs are located near the business markets they will serve – major urban centres, or groups of centres – and are linked to key supply chain routes. Given the locational requirements and the need for effective connections for both rail and road, the number of locations suitable for SRFIs will be limited, which will restrict the scope for developers to identify viable alternative sites".
		In addition, paragraph 2.54 states inter alia that it is essential that all proposed SRFI "have good connectivity with both the road and rail networks, in particular the strategic rail freight network".
		As set out in the Transport Assessment (APP-114) at paragraph 3.3.2, the Site is bound by the A5 Trunk Road to the north, the M6 motorway to the east and the A449 Trunk Road to the west,

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	ii) The impacts on transport networks – sustainable transport access (paragraphs 5.201 – 5.201 of the NPS)	providing a link to the M54 some 6km to the south. The Site is ideally located in relation to the strategic road network, with agreed access points provided to the A5 and A449, providing onwards connecting to the M6 and M54 motorways.  As set out in paragraph 3.2.1 of the TA (APP-114), the site is located at an intersection of the Strategic Rail Network (the West Coast Main Line, Western Branch), with direct rail access provided.  ii) A general thread of the Milestone Note is that the site is not currently sustainable and does not promote further measures that would make the site sustainable in the future from the transport perspective, to the degree that it would satisfy the NPS. The Proposed Development does seek to make the scheme sustainable from the Transport perspective, as set out below:  • Promotes active travel through the provision of improved shared use pedestrian / cycle routes on the A449, A5 and the A449 / A5 link road. Improved crossing facilities are provided for non-motorised users at the A449 and A5. Please refer to the Highway General Arrangement drawings (AS-068 and AS-070).  • The Applicant has agreed a robust Updated Site Wide Travel Plan (SWTP) with the relevant Highway Authorities, (REP5-037).

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		<ul> <li>Promotes car sharing through the SWTP as set out at paragraphs 5.4.1 – 5.4.6.</li> <li>Provides improvements to existing scheduled bus services, which will also provide further opportunities for the existing travelling public, including providing expended links to existing business, as set out in the Sustainable Transport Strategy Document (APP-136). Please refer to the applicants Deadline 4 submission in respect of References 2.4.1 - 2.4.4 (REP4-003).</li> <li>Will implement targeted shuttle bus services relative to future employee locations in order to provide further non car means of access to the site, particularly at shift change over times.</li> <li>Seeks an achievable modal shift target away from Single Occupancy Vehicle journeys relative to the site location, as agreed with the SCC, as set out in paragraph 9.18 of the SoCG (REP2-007). As set out in the SWTP at paragraph 9.2.7, the targets will be reviewed annually (REP5-037).</li> <li>It has been agreed with SCC that the matrix appended to the SWTP at Appendix A setting out the measures presented by the Sustainable Transport Strategy (APP-</li> </ul>

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	iii) The impacts on transport networks – highway capacity (paragraphs 5.201 – 5.201 of the NPS)	<ul> <li>136) are sufficient in order to achieve the 10% modal shift target. Please refer to paragraph 9.9 of the SoCG with SCC (REP2-007).</li> <li>In the event that the modal shift target as set out within the SWTP (REP-037), is not being met, a Travel Plan Contingency Fund can be drawn upon and which is secured via the draft Development Consent Obligation (REP5-031). Clearly it is in the applicants interests to ensure that the SWTP is a success so that it need not be exposed to this further financial obligation.</li> <li>iii) The Milestone Note sets out that from the highway operational perspective, in relation to baseline traffic conditions, the South Staffordshire VISSIM Model does not adequately report existing vehicle queues.</li> <li>The SSVM has been prepared on behalf of HE and is a validated model. It has been amended by the Applicant to reflect the Proposed Development and the additional traffic data added to it to reflect local conditions has been validated against the relevant WEBTAG criteria, as set out in Appendix O of the Transport Assessment (Local Model Validation Report Feb 2017 VISSIM) (APP-144).</li> </ul>

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		The VISSIM model has been thoroughly scrutinised by HE and SCC. Please refer to paragraph 9.5 of the SoCG with SCC (REP2-007), paragraph 3.2.1 of the SoCG with HE (REP2-008) and finally, HE's answer to ExQ1.7.7 (REP2-036).  It is therefore not accurate to state "that the traffic modelling methodology in the WMI application appear to be under reporting the queue lengths currently experienced on the highway network".  It should also be noted that it is not necessary to achieve modal
		shift targets away from Single Occupancy Vehicle use in order to allow the local highway network to operate satisfactorily with the Proposed Development in place. The Applicant has undertaken a worst-case assessment of the operation of the highway network which is shown to be acceptable without the 10% modal shift away from Single Occupancy Vehicles. Please refer to HE's Deadline 2 submission (REP2-036), in answer to ExQ1.7.3.
		It remains the Applicants view that as agreed with both SCC and HE, sufficient mitigation measures are proposed in order to satisfy the requirements of the NPS from the Transport perspective.
The Woodland Trust	Reference: West Midlands Interchange	
16.1.023	Representation	

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	The proposed development will result in impact to five veteran oak trees (T153, T159, T175, T178 and T279) either through direct loss of specimens in order to facilitate construction or through damage to the root systems via encroachment of root protection areas (RPA). It is essential that no trees displaying	Reference to Section 9.3 of the Planning Statement (APP-252) provides the policy context with regards to the loss of irreplaceable habitats as set out in the National Policy Statement (NPS) and full details of the mitigation strategy for the loss of the four veteran trees.
	ancient/veteran characteristics are lost or damaged as part of the project. Any loss of veteran trees would be highly deleterious to the wider environment of veteran trees within close proximity, which may harbour rare	The applicant has carefully considered the eleven veteran trees in the design of the layout to limit the impacts on veteran trees, seeing seven of those eleven retained.
	and important species.	At paragraph 9.3.7 of the Planning Statement it states that the principal mitigation measure has been the careful design of the parameters of the Proposed Development to ensure that as many of the veteran trees are retained as practicable.
		There is a commitment through the DCO to secure the future management of all trees within the site including those of veteran status.
		Thus, in light of other comments already received through the Examination Process amendments have been made to the FEMMP (Document 6.2 (ES Technical Appendix 10.4, REP5-033) to commit to extending the protection measures outlined in the Arboricultural Assessment (Document 6.2 ES Technical Appendix 12.7, APP-105) to include 'transitional / future' veteran trees.

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		In section 3.6 of the FEMMP (§3.6.1) commitment is given to a Veteran Tree Management Program which will cover the long-term care and management of all veteran trees.
		Management will be directed at protecting longevity, wherever possible, to ensure there is no avoidable loss. Each EMMP for the various phases of development coming forward will refer to the program and confirm key details of the proposed treatments.
The Woodland Trust	Woodland Trust concerns	
16.1.024	Due to the significant concentration of trees displaying veteran characteristics in the area, the veteran trees likely to be lost are providing key habitat for the often rare species that are associated with decaying wood habitat, aging bark and old root systems, such as saproxylic invertebrates and certain species of bats and birds. The larger the concentration of old trees in an area and the longer they have been present on site, the richer the variety of species you will find among them.	The positions of the eleven veteran trees across the site would not be considered as being 'significant concentrations' due to their scattered distribution. Where they occur, trees are either limited to small groups of two in close proximity to one another or as isolated individual specimens separated from each other. As such, any connectivity between specimens would be limited. Notwithstanding this, it is recognised these are highly important trees and management will be targeted at improving future connectivity between individual specimens as part of the wider veteran tree management. Methods by which this can be achieved is through planting of young oak harvested through hard-wood cuttings and growing acorns from the four veteran trees being removed to ensure genetic continuity and furthermore, placing large sections of the veteran trees being removed close to the retained

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		specimens to provide continuity of dead wood habitat (Document 6.2 (REP5-033, ES Technical Appendix 10.4, paragraph 3.5.9)
The Woodland Trust	Woodland Trust concerns	
16.1.025	Trees are susceptible to change caused by construction/development activity. As outlined in "Trees in relation to design, demolition and construction, BS 5837:2012", the British Standard for ensuring development works in harmony with trees, construction work often exerts pressures on existing trees, as do changes in their immediate environment following construction. Root systems, stems and canopies, all need allowance for future movement and growth, and should be taken into account in all proposed works on the scheme through the incorporation of the measures outlined in the British Standard.	All retained trees, including those of veteran status have been fully considered in the design of the scheme and moving to the detailed design stage, full account will be taken of the presence of retained trees to ensure they are suitably incorporated in accordance with best practice.  The retained veteran trees will be robustly protected during the construction phases to safeguard against construction impacts as outlined in the Arboricultural Assessment (Document 6.2, ES Technical Appendix 12.7, APP-105) and in accordance with BS 5837 (2012), as secured in paragraph 3.3.2 of the FEMMP (Document 6.2, ES Technical Appendix 10.4, REP5-033).
The Woodland Trust	Woodland Trust concerns	
16.1.026	The Trust notes within the arboricultural impact assessment that the applicants are considering translocation of the veteran trees outlined for removal. Translocation should only be considered as a last resort solution in an attempt to save trees which are	The Woodland Trust have misunderstood the arboricultural impact assessment. It is not the intention to 'translocate' the trees in the true sense, as it is recognised that there would clearly be a low chance of success.

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	otherwise approved to be felled. This method should not be considered as a viable alternative to the protection, management and retention of these trees in their original location. Translocation of veteran trees is a highly risky method that has a very low chance of ensuring the continued survival of such trees – it is a process much more suited to young trees.	The proposed 'translocation' in the context of veteran trees at the site refers to the moving of 'dead wood habitat' i.e. large sections of the tree i.e. trunk and limbs / branches, either as standing dead wood 'monoliths' (erected in an upright position using appropriate supporting techniques) or laying on the ground, all of the methods and techniques for which are outlined within the Arboricultural Assessment at paragraphs 5.41 and 5.4.2 (Document 6.2 ES Technical Appendix 12.7, APP-105).
The Woodland Trust	Conclusion	
16.1.027	In summary, unless all trees displaying veteran characteristics are retained and adequately protected with a RPA in line with Natural England's Standing Advice of 15 times the diameter (or 5m beyond the canopy if that's greater), the Trust will remain strongly <b>opposed</b> to the proposed project and considers the scheme in direct contravention of national planning policy due to the loss of irreplaceable habitats.	In summary, the Applicant has sought to keep the loss of any veteran trees to an absolute minimum and has clearly stated the reasons why they cannot be retained. The Application has also set out clear proposals to mitigate for the loss of the four individual specimens and conservation of the remaining seven true veterans and eighteen 'transitional / future' specimens. Therefore, with regards to veteran trees, the Proposed Development is in compliance with national planning policy.
		The DCO through the FEMMP and detailed EMMP's, commits to conserving and managing all the retained veteran trees and 'transitional / future' veteran trees. As part of the mitigation and future management strategy, best practice methods will be deployed to conserve the valuable habitats.

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
PILS		
Donna Gilmartin	Sending of Questionnaires by Applicant	
16.1.028	In reply to the applicants answer below, I myself never received any questionnaire(s) from the applicant or from Derry Mocket from Paribus who was in attendance at the early meetings with the family.  I would like to know when this was sent, to whom it was sent and the address it was sent to. My brother, James Powell, also did not receive a questionnaire	The ExA will note from the Book of Reference (Document 4.3, APP-007) and the Applicant's Post Hearing Submissions in respect of the CAH (Document 14.1, REP4-003) that the various Croft House/MMS Parcels are unregistered.  The Applicant issued through its land referencing agent (TerraQuest) Land Information Questionnaires (LIQ) in respect of all registered land falling within the Order Limits and in respect of any interests in unregistered land of which the Applicant was aware. It also posted notices around the site and targeted at areas of unknown interests wherever land was unregistered - this included the MMS and Croft House parcels, and a notice was posted in the Croft Lane area.  As a result of the Applicant's knowledge of the MMS interests, LIQs were issued in February 2017 to MMS Gas and Anthony Powell. Anthony Powell telephoned TerraQuest in response to the LIQ
		providing information on the ownership of Croft House. In addition, Donna Gilmartin contacted TerraQuest in June 2017 referring to the unknown owner notice that had been placed in Croft Lane providing further information.

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		The Applicant has also been in regular contact with the Powell family and is confident all land interests have been recorded accurately.
Individuals		
Daniel Williams	<u>Transport and Noise Issues</u>	
16.1.029	I have reviewed ExQ2 (the further written questions) published on 19th June 2019 and have found that heading 2.2.27 only poses questions from part 1 of my written representation (REP2-178). The 2.2.27 heading does not make any reference to parts 2 or 3 of my representation.  Parts 2 and 3 of my submitted representation cover very specific transport and noise issues along the A449 between Station Road and the M54.	The Applicant responded on the points Mr Williams raises in their response at NOI.1 and NOI.2 of their Deadline 3 submission responding to other parties' Deadline 2 submissions ([Document 11.1, REP3-007)].
Tim Brunton	Cross Britain Way	
16.1.030	I have only just found out about the proposed development in the last few days. I understand the developers only discovered the existence of Cross Britain Way in the last few weeks despite our waymarker stickers on Penk29. It has also been shown on OS online mapping since last year and sheet maps	The Applicant has reviewed the latest OS online mapping information. This shows part of the Cross Britain Way (CBW) in close proximity to the Site, however, the section of the Cross Britain Way that runs through the Order Limits is not identified on the OS online mapping as being part of the CBW. See <b>Appendix 3.</b>

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	for the past few months. Perhaps that is the reason we were not consulted from the outset. The Mac Ways Assoc website also is shown on the waymarkers.	As set out in the Applicant's Responses to Other Parties Submissions (REP5-006) at IND08 PRW and IND09 PRW, a revised and improved alignment is proposed, which could be utilised for those wishing to walk the Cross Britain Way.
Tim Brunton	Cross Britain Way	
16.1.031	1 The impact of the development on either of the two currently possible routes for CBW through the site. The effect on Penk 29 is self evident. It is permanently removed, although I would point out that a Footpath	As set out within the following answers, replacement rights of way and permissive paths are provided in order to provide alternatives to PENK 29.
	Diversion Order will be required before this can go ahead. I will object to such an application on the grounds of the loss of an attractive field path that has been a public right of way probably for centuries.	Please also refer to the Applicants submission to other parties (REP5-006) and the response to points IND08 PRW and IND09 PRW, which set out the suitable revised alignment for CBW. This route would not require walkers to utilise the A449 as is currently the case in order to reach PENK 29.
	The other route available is the canal/Gravelly Way, and thence out to the A449 and Crateford Lane westwards. I have serious concerns here in terms of visual amenity, with the whole environment and setting of the canal being severely and irreversibly damaged.	In terms of the change to visual amenity for anyone using the canal towpath and Gravelly Way, this has been considered and assessed as detailed within the landscape and visual impact assessment (Doc 6.2; ES Chapter 12).
		The proposed development will include broad landscape areas and corridors to the east and west of the canal, north of Gravelly Way and this will include mounding and extensive new native planting and habitat areas. These proposals in conjunction with the

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		conserved canalside trees and planting will assist in mitigating any potential adverse effects upon visual amenity for users of the canal towpath as an alternative route.
Tim Brunton	Cross Britain Way	
16.1.032	2. The plan in any event shows no footpath link from the canal onto the new access road. The applicant has referred to the canal /Gravelly Way being a preferable route for CBW but the plan shows no link from the canal onto the new Gravelly Way, and no indication of how pedestrians would be routed down to the A449.	Details of the future rights of way are set out on Documents 2.3 Access and Rights of Way Plans (REP5-012 – REP5-018). These formed part of the original DCO submission and have been revised following negotiations with SCC.  A right of way will be provided from the A449 / A5 link road to the canal. This is shown on Document 2.3C (REP5-015), as shown between points AA and LL.
		Other permissive routes will be available to connect to the canal, as also shown on Document Series 2.3 (REP5-012 – REP5-018).
		A shared use cycle / footway will be provided adjacent to the A449 / A5 link road and has always formed part of the Proposed Development. This will connect the canal to the A449. This facility is shown on Access and Rights of Way Plans 2.3A, B and C (REP5-013 – REP5-015) and the Highway General Arrangement Plans 2.9C (previously provided at AS-068, but updated Document 2.9 submitted at Deadline) and Document 2.9D (AS-069). This will

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		provide a connection from the canal to the A449 with a designated facility provided for non-motorised users.
Tim Brunton	Cross Britain Way	
16.1.033 Tim Brunton	3. If access from the canal is proposed I am concerned about the route from there to Gravelly Way in terms of pedestrian safety, given the number of crossing points of busy internal access roads and the huge number of	As shown on Document 2.9C, it is proposed to provide signal controlled pedestrian / cycle crossings of both the A449 / A5 link road and the A449. These are shown on the Highway General Arrangement Plan, Document 2.9C (previously provided at AS-
16.1.034	vehicle movements predicted, a high proportion of which would be HGVs.  4. Then there is the question of how it is proposed to get walkers across the A449. No provision is shown on the layout plan for CBW walkers, or anyone else	068, but updated Document 2.9 submitted at Deadline 6).  It has been agreed with Highways England that these crossings can be located in appropriate positions and would serve existing non-motorised user desire lines.
	coming off the canal or from the footway alongside the A449.	It should be noted that traffic flows on the A449 / A5 link road are less than those the A449 itself. Details of forecast traffic flows with the Proposed Development are provided in the Transport Assessment (APP-146) at Figures T5 – T8.
Tim Brunton	Cross Britain Way	
16.1.035	CONCLUSIONS	
	For the above reasons I strongly object to the proposal. However, if the Minister decides, notwithstanding my	

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
	and other objections, to grant permission, I would suggest conditions be attached to incorporate the following:  1. The community park be effectively extended to also incorporate the length of the canal across the site, for the canal corridor to be widened and buildings closest to it to be reduced in height, so that, in visual terms at least, users of the canal and its towpath will be unaware of the new development surrounding it, and to be screened more imaginatively than with the motorway embankment shown on the plan;	1. The screening of the Proposed Development has been the subject of prolonged and detailed discussions with a number of consultees and would not resemble a "motorway embankment".  In respect of extending the community park to incorporate the canal, it should be noted that the Croft Lane Community Park will effectively adjoin approximately 500 metres of the canal corridor and towpath and will thus function as a well-connected and complementary resource in landscape, biodiversity, public access and amenity terms. There is no need to extend the community park to encompass any part of the canal.  The proximity and heights of the proposed buildings in relation to the canal has been to subject of extensive assessment and design work. The proposals include substantial landscape areas to both sides of the canal, also incorporating mounding where considered beneficial in mitigating and limiting the effects upon users of the canal and its towpath.  These proposals will screen and filter views towards much of the Proposed Development, including the lower and more active surrounds to the new buildings.

Body / Individual (Reference)	Comment (Reference)	Applicant's Response
		For reference, to the north of Gravelly Way, the closest Development Zones of the Proposed Development are set back from the Canal by at least 70 metres and up to approximately 250 metres. To the south of Gravelly Way, Development Zones are in closer proximity to the Canal (Zones B & C); yet along this stretch of the canal, these Zones (B & C) are not as close to the canalside as the existing SI Chemical Works, Four Ashes Industrial Estate and ongoing Bericote development.
	2. Bridge78A, and the existing access from there off the canal, up onto the old railway bridge, and the current Gravelley Way, all be retained alongside and separate to the new road, as a dedicated footpath/cycleway from the canal as far as the A449; and	2. As shown on the Access and Rights of Way Plan Document 2.3A (REP5-013) and 2.3C (REP5-015) Bridge 78A will be retained and will provide a Permissive Path to serve both cyclists and pedestrians. It will connect to the A449 / A5 link road via further permissive paths, whilst to the north, the canal connection will be provided via a new Right of Way. It will not be possible to retain Gravelly Way as far as the A449, however dedicated shared use pedestrian / cycle facilities will be provided adjacent to the proposed A449 / A5 link road, being adopted by SCC as highway authority, providing unencumbered access rights for the public.
	3. Provision, presumably in the form of pedestrian lights, be made to cross A449.	3. As shown by Document 2.9C, (previously provided at AS-068, but updated Document 2.9 submitted at Deadline 6) it is proposed to provide traffic signal-controlled pedestrian / cycle crossing facilities of the A449 and the A449 link road.

The West Midlands Rail Freight Interchange Order 201X Applicant's Responses to Other Parties Deadline 5 Submissions and Other Requests for Information Document 16.1 Deadline 6: 19 July 2019

#### **Response to Action List items**

Agenda Item	Action	Applicant's Response
2 – Applicant's Need Case (level of agreement as to the current need for rail-served logistics)	In respect of Applicant's response to ExQ1.2.5 Applicant to check plan periods are the same and whether or not the figures assumed straight trajectory of delivery	Please paragraph 1.3 of the Applicant's Post Hearing Submissions for ISH 5 (Document 16.2 submitted at Deadline 6).
4 – Relationship between scale of warehousing and the viability/growth of rail services	Applicant to provide information on the distance at which rail freight services become viable economically.	Please see Appendix 3 – Viability of Rail Services of the Applicant's Post Hearing Submissions for ISH 5 (Document 16.2 submitted at Deadline 6).
5 – Rail connectivity  (phasing of rail infrastructure and measures to secure this provision)	Applicant to provide details of the phasing of the rail infrastructure assumed in its appraisal and confirm the IRR impact if the rail is delivered before the occupation of any B8 space.	Please see Section 6 of the Applicant's Post Hearing Submissions for ISH 5 (Document 16.2, submitted at Deadline 6) and paragraphs 1.20 – 1.28 of the Applicant's Post Hearing Submissions for ISH6 (Document 16.3) submitted at Deadline 6.
6 – The need for encroachment on land to the south of Vicarage Road	Applicant to explain why IRR is a more appropriate metric than profit on cost.	Please see Section 6 of the Applicant's Post Hearing Submissions for ISH 5 (Document 16.2, submitted at Deadline 6).

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Document 16.1
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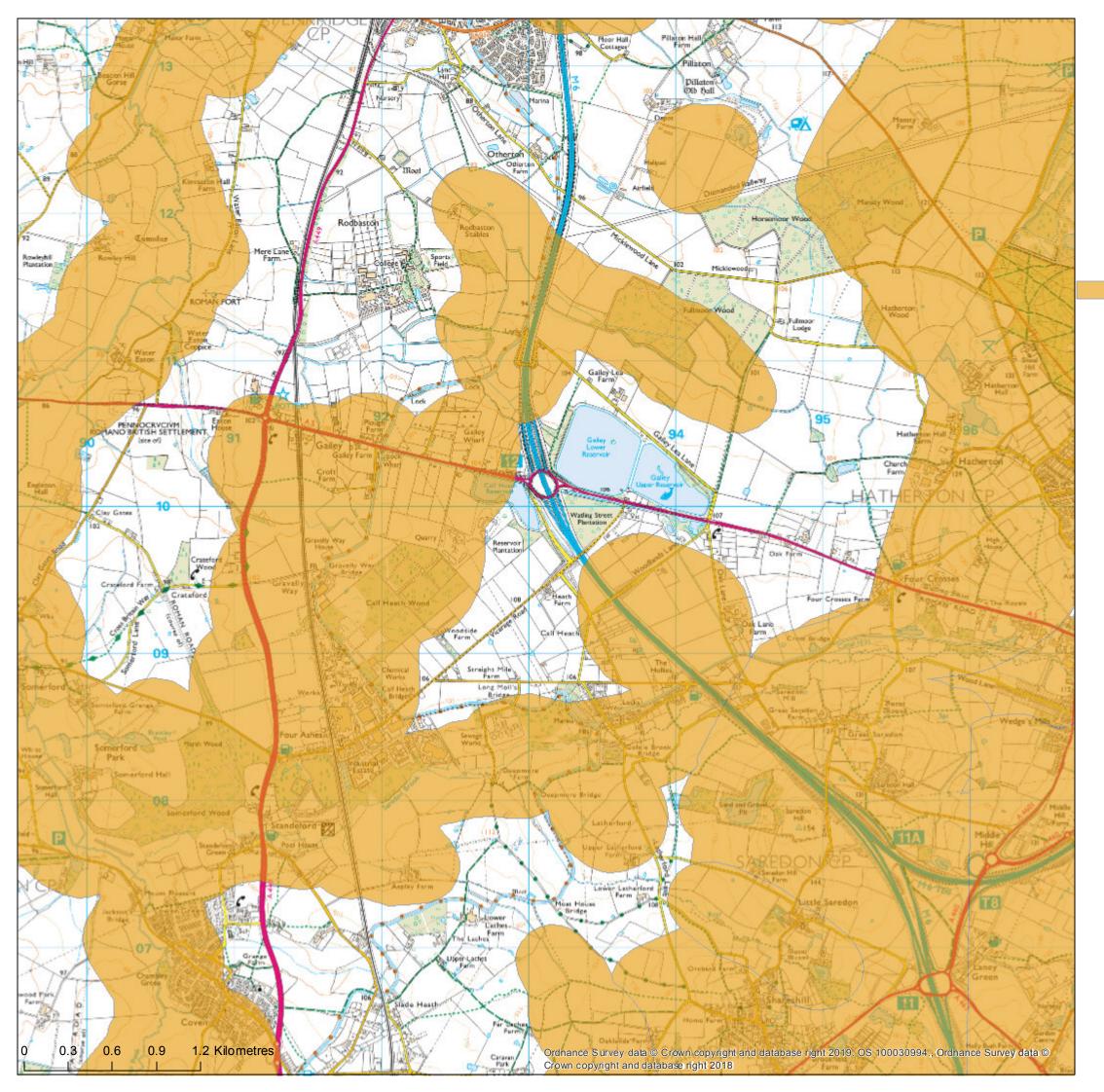
Agenda Item	Action	Applicant's Response
including implications for viability and deliverability of the WMI scheme		
8 – Green Belt tests – NPS and NPPF	Applicant to address Green Belt uses referred to in paragraph 141 of the NPPF	See paragraph 7.16 onwards of Document 16.2 (Applicant's Written Summary of Oral Submissions from ISH 5.

# Plan Showing Extent of Minerals Safeguarding Area

The West Midlands Rail Freight Interchange Order 201X

Four Ashes Limited







#### **Planning Information Web Map**

Staffordshire County Boundary

Mineral Safeguarding Areas

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Applicant Response to Greensforge Sailing Club

The West Midlands Rail Freight Interchange Order 201X

Four Ashes Limited





#### **Appendix 2: Applicant response to Greensforge Sailing Club**

Response to ExQ2.13.5 on behalf of
<b>Greensforge Sailing Club</b>

#### **Applicant Response**

#### **GENERAL COMMENT**

The Applicant has attempted to further engage with Greensforge Sailing Club since the meeting of 20<sup>th</sup> May 2019 (the minutes of which are included in the sailing club's response REP5-055). As noted in these minutes the applicant proposed to prepare a draft statement of common ground (SoCG) and the intention was that the agreed form of these minutes could form a basis for a draft SoCG. The applicant issued the minute meetings on the 28<sup>th</sup> May 2019, which included additional post meeting information as requested by the sailing club, and asked for any comments or queries on these minutes. The applicant received no response. Subsequently the applicant has followed up with emails and telephone calls in an attempt to continue dialogue with the sailing club with no response to date.

#### RELEVANT EXPERIENCE OF ADVISORS

- 2.2 "RWDI appear to have engineering experience in relation to designing buildings whilst accommodating comfort at the ground level for pedestrians (see references in Section 1 of the report). They also make reference to generalised windflow patterns in Section 5 of the report which refer to down-washing, channelling and acceleration around corners. All of these conditions refer to the impact of obstacles such as buildings on its windward side. This is not applicable in this case, as the reservoir is located on the leeward side of the proposed buildings."
- RWDI has been studying how buildings and the wind interact for more than forty years. RWDI has helped clients understand the effects of these interactions on every continent, and at scales ranging from individual buildings to recent work conducting physical and computational wind modelling within the entire City of London. RWDI are recognised experts in wind engineering.

The RWDI assessment (REP4-013) does consider effects on leeward side of proposed buildings. While downwashing is an impact occurring on the windward side of a structure, corner accelerations and channelling are problems which can occur downwind of a structure (i.e. on the leeward side). Furthermore, the wake zones



	Response to ExQ2.13.5 on behalf of Greensforge Sailing Club		Applicant Response
			highlighted in the RWDI report denote areas on the leeward side where the influence of the structures may be experienced.
2.3	"We note that the applicant has previously disputed the earlier submissions by Greensforge Sailing Club which shows the potential impact on windflow on the leeward side of an obstacle on the basis that this is identified as being relevant to wind turbines only. This shows a misunderstanding of the point being made, which is not how to ascertain clean wind for a wind turbine, but to identify the impact of the windflow once an obstacle is placed upwind."	2.3	The Applicant has not misunderstood the point and is in agreement with the principle of potential effects from obstacles. However, it is not considered that comparison of the significance of leeward sailing effects on the reservoir are directly comparable with measures which are intended to optimise the siting of a wind turbine. By inference a wind turbine will still operate in a less than optimum location.  Furthermore, the wind turbine example is a rule of thumb (a simplified approach) and the reason to use computational fluid dynamic (CFD) simulation is to adopt a more rigorous approach to assess impacts which also has the benefit of taking into account local features/topography.
2.6	"A key publication from this organisation is the "Small Wind Guidebook" (https://windexchange.energy.gov/small-wind-guidebook). Whilst this provides a detailed level of guidance on determining whether the use of wind energy is achievable, it specifically provides detailed guidance on choosing the best site for the location of a turbine. Within this section, details of how the wind becomes more turbulent on the leeward side of an obstruction is identified. Importantly, it advises that the further away from the obstruction the less turbulence will be encountered."	2.6	Refer to response 2.2 above. The principle of effects on the leeward side of a structure is not disputed. The concern is directly equating optimisation of a wind turbine location with sailing effects; the referenced publication does not state applicability to a sailing assessment.



	Response to ExQ2.13.5 on behalf of Greensforge Sailing Club		Applicant Response
2.7	"Further advice from the Danish Wind Industry Association explains clearly what happens to the wind when an obstacle is put in its path and is shown in Figure 2 below. Specifically, it suggests the level of turbulence generated from an obstacle can be as much as three times the height, and that turbulence is more pronounced behind the obstacle than in front of it. It advises that major obstacles should be avoided, especially if they are upwind."	2.7	The example provided doesn't take account of existing constraints. The reservoir is not an area of open water with no existing obstacles. In particular, it is significantly screened by trees, which have a profound effect on the sailing quality on the reservoir.
APPR	ROACH TO COMPUTATIONAL ANALYSIS		
2.9	"It is noted that the RWDI report, despite discussion with the applicant, makes no specific reference to the wind speed utilised in the modelling. This is of significant concern, given that the overall purpose of the report is to identify the potential impact on windflow arising from the proposed development."		As noted in the RWDI report (REP4-013), the steady-state nature of the CFD assessment means that the flow patterns will generally be consistent regardless of the wind speed applied at the boundary of the study area. Though the magnitude of the resulting flow would change.
			The 80 <sup>th</sup> percentile wind speed (i.e. a speed that would be exceeded only 20% of the time) was selected in order to present the resultant speeds for a relatively high wind speed which would be at a reasonable frequency and where the effects of any change might be more readily felt.
			The reference conditions are reproduced below alone with the corresponding wind speed at 10 m (which is the typical measurement height for wind speeds)



	Response to ExQ2.13.5 on behalf of Greensforge Sailing Club		Applicant	Respo	nse				
2.10	"At the meeting held on 20th May (see Appendix 1), Sailing Club members advised the applicant about the 'usual' wind conditions on the reservoir. This was intended to assist their understanding of the conditions usually realised, and to ensure that the model accurately reflected this position. It is noted that RWDI nor Wolfson Unit have chosen to visit the site prior to the issue of the reports, in order that they can confirm that the conditions identified in the modelling accurately reflect site reality."	2.10	80% speed (m/s @ 600m) 80% speed (m/s @ 10m)  Using the proportion of the proportion	ethod, a the mod ith unde and interp ct the CFI ognised n ch in this	prior site elling. The rstanding preting the D modelling instance	visit wo ne visits the ope e effects ing under approac is based	ould not he on-site of the restaken. It he for the on 30 ye	nave pro- have ass / activiti sults, alth is consid consister ars (1995	vided any sisted the es at the nough this ered best ncy of the
2.11	"In a post-meeting note prepared by the applicant (See Appendix 1) it is noted that RWDI have not been able to confirm "anecdotal	2.11	Refer to resp					-	



	Response to ExQ2.13.5 on behalf of Greensforge Sailing Club		Applicant Response
	evidence' in relation to wind conditions offered by sailors who have regularly sailed on the reservoir over the last 30 -40 years, quoting that the computational model doesn't identify this as the reasoning for their response."		
2.12	"This suggests the applicant would rather rely on computational analysis over local knowledge and site experience, without the benefit of having visited the site to ensure the computational baseline conditions accurately reflect the conditions experienced on site."	2.12	The author of the Wolfson Unit report (REP4-012) holds a PhD in naval architecture and has over 20 years experience as a consultant engineer at the Wolfson Unit for Marine Technology and Industrial Aerodynamics conducting consultancy and applied research. His specialist areas include:  • Yacht performance prediction  • Experimental hydrodynamics and aerodynamics Clients include America's Cup teams, race yacht and superyacht designers, national and governing bodies. Previous positions held by the author:  • Royal Yachting Association (RYA): Technical Committee Member  • Royal Institute of Naval Architects (RINA): Small Craft Group Member  • J Class Association: Technical Director Current Positions:  • Royal Ocean Racing Club (RORC): Technical Subcommittee member  • University of Southampton: Lecturer "Sailing yacht design" module  • Club dinghy sailor



	Response to ExQ2.13.5 on behalf of Greensforge Sailing Club		Applicant Response
			As part of the assessment the reservoir has been simplified to a grid of points and matched to data sample points in the RWDI CFD Study. Previously developed sailing quality criteria have been applied to each of the discrete wind angle data sets from the RWDI CFD Study and combined with historic statistically valid wind rose data to assess the proportion of 'good' sailing quality time when the wind is within the SSE to W range.  As for any defensible environmental assessment, there is a need to follow a recognised approach. Any deviation from a standard approach would be open to question. It's not a question of dismissing 'local knowledge', but that the scientific approach cannot take account of anecdotal information provided.
CALM	IING EFFECT OF COMPUTATION		
2.13	"It is noted, and confirmed by the applicant, that the computational analysis reflects 'steady state conditions', i.e. that the wind is constant across the reservoir at all times and wind speeds are effectively 'averaged". However, in reality the wind is very seldom in steady state, and gusts do occur. The consideration of steady state conditions result in a 'smoothing' or calming impact on the wind conditions in all preand post-development scenarios."	2.13	The applicant accepts there are some limitations to CFD modelling (as there is for any modelling technique), however the method overall is considered appropriate. Also, it is considered beneficial to utilise scientific assessment to better understand effects rather than not undertake any modelling, otherwise consideration of the issues would be more subjective
			While steady state approaches cannot fully capture transient phenomena like gusts, due to the mathematics involved they do not always produce more 'calm' conditions. For example, a steady-state analysis will predict a corner acceleration occurring in a



	Response to ExQ2.13.5 on behalf of Greensforge Sailing Club		Applicant Response
			specific location. However, in reality the unsteady nature of the wind would result in an acceleration zone which moves. Thus, if the actual average wind speed was measured at a specific location, the situation could arise where the CFD prediction of 'mean' speed was higher than the experimental results.  Acknowledging gusts and other turbulence based phenomena would require the use of what is called 'transient' CFD. The use of transient in built environment applications is still in its infancy. There is a myriad of technical hurdles which need to be overcome before time dependent CFD simulations would be appropriate in this application.
2.14	"Such an approach will result in a distortion of the results in a beneficial manner. Particularly, it will not consider the potential turbulent effects arising from the changes in wind flow following the installation of an obstacle such as a building for example. Again, this was discussed at the meeting on 20th May, and whilst it is accepted that the impact of turbulence on the reservoir is difficult to assess, it is this turbulence that will make the conditions for sailing more challenging."	2.14	Refer to response to 2.13 above. Also areas of higher turbulence in either the existing or proposed scenarios may lead to zones of local wind speeds and direction changes that will not satisfy the sailing quality criteria, therefore through inference the approach has some ability to capture some properties of increased turbulence. The existing scenario will already have a level of turbulence due to the upstream tree cover.
2.15	"In particular turbulent wind conditions the changes in wind speed and direction become a significant challenge for any sailor. More experienced sailors can usually overcome such challenges although this does depend on the circumstances. For less experienced sailors, turbulent conditions are likely to act as a deterrent to enjoyment,	2.15	The sailing quality criteria in the Wolfson Unit assessment (REP4-012) are purposely set to a cautious level to include some allowance for other effects. The allowable wind direction and speed change criteria are conservative, 30% and 20 degrees



Response to ExQ2.13.5 on behalf of Greensforge Sailing Club	Applicant Response
if not a potential danger. The applicants have made no attempt to demonstrate what impact turbulence will have on sailing conditions. The use of 'steady state' assumptions will result in 'steady state' outcomes."	respectively. The maximum wind speed limit is low to adequate to accommodate the impact of gusts upon novice sailors

2.16	"The RWDI report was prepared to provide an assessment of the wind conditions in and around the proposed development, in order to provide initial estimates of the effe cts of the development on sailing conditions across the reservoir. In doing so, it makes reference to the determination of wind speed as being that of the 80 <sup>th</sup> percentile wind speed for each direction studied. However, it fails to specifically state exactly what that speed is."	2.16	Refer to response to 2.9 above.
2.17	"The Wolfson Unit report identifies that their assessment has considered wind speeds in a range between 3 and 9 knots (5.5km/hr and 16km/hr or 3.5miles/hr and 10miles/hr). It makes no specific reference as to whether these speeds have been derived from the assumptions in the RWDI report. It is also noted that the RWDI report does not provide any results of assessment which show consideration of a range of wind speeds as well as directional analysis. The lack of evidence base in this regard generates a great degree of uncertainty as to how this information has been sourced and determined, and the speeds utilised in their assessment."	2.17	The RWDI data has been divided by the relevant ambient wind speed to create a ratio of point wind speed to a reference (in flow) wind speed measured at a height of 10m, this is then combined with the wind rose ambient wind speed data and statistical processes to evaluate the point for point wind speeds. The steady-state nature of the simulations allows the assessment to scale the results to any required ambient condition to be reviewed.



2.18	"The Wolfson Unit report suggests that speeds of 3 to 9 knots are suitable for beginners and novice sailors. Figure 3 shows the physical conditions felt in relation to wind speed. Specifically, at an equivalent of 3 knots, light air conditions would be noted. At this point, sailing becomes difficult due to the lack of sufficient wind to fill the sail to generate movement, even for experienced sailors."	2.18	Figure 6 of the Wolfson Unit Assessment (REP4-012) shows the existing situation. So in effect the assessment is comparing the same wind speeds for the baseline conditions versus the proposed development scenarios.
2.19	"At an equivalent of 9 knots, a gentle breeze is noted - the point at which leaves and twigs will move and flags flutter. Sailing is more feasible at this wind speed and is considered appropriate for beginners. However, it is still considered to be a light sailing wind by experienced sailors, who can feasibly and frequently sail in wind speeds up to 15 - 20 knots (28km/hr – 37km/hr or 17miles/hr - 23miles/hr)."	2.19	The applicant accepts that 9 knots is a 'light' wind for experienced sailors. The assessments focused on novices as they would be the cohort least able to adapt to wind condition changes.  However, using the 80 <sup>th</sup> percentile captures conditions for all sailors and is reasonably representative of worst case effects.
2.21	"On the basis of the evidence in Figure 3, it is clear that RWDI are incorrect in their assertion that wind speeds of between 3 and 9 knots can be considered as 'high' wind conditions (see post meeting note in Appendix 1)."	2.21	The stated reference to "high" is related to the 80 <sup>th</sup> percentile data, which is independent of the 3-9 knots range.
2.22	"The assessment has only considered a range of speeds which only reflect very light wind speeds, and therefore very gentle sailing conditions. We note that the Wolfson Unit indicate that their assessment is based upon conditions for beginners and novice sailors. However, this approach fails to recognise a significant number of experienced sailors who are also Club members. Consequently, the analysis fails to provide a robust assessment of the potential impact on a wide range of sailing conditions."	2.22	The approach still incorporates the impact of localised changes of wind direction and speed which would affect both novices or experienced sailors regardless of wind speed. Part of the sailing criteria identifies the areas of high variation in speed and direction, which is independent of ambient wind speed, so applicable for all sailors and wind speed ranges.

CONSIDERATION OF A WIDER RANGE OF WIND SPEED



2.23	"The applicant was requested to consider providing an assessment of a wider range of wind speeds at the meeting on 20th May, in order that a fuller range of sailing conditions that may be understood in the context of the proposed development, and to identify the potential impact arising for a broader range of sailing experience within the Club."	2.23	A wider range of wind speeds wouldn't make significant differences to the outcome of the existing assessment. For example, if the sailing quality approach were to be extended to a greater range of speeds, i.e. 3 knots – 16 knots for instance then the relative differences between existing and development scenario conclusions are likely to be similar.
2.25	"It is noted in the quotation above that the applicants assert that consideration of a different wind speed would be arbitrary, and that the results overall would not change. The Sailing Club disagree with this statement and consider that when greater wind-speeds are realised the impact of obstructions would be greater."	2.25	The relative impact of the obstructions will not change (ignoring higher order effects) with increasing wind speed. The extent of the wake/flow field is primarily driven by the position and scale of the obstruction.
2.27	"The Association have produced a Wind Shadow Calculator (http://drømstørre.dk/wpcontent/wind/miller/windpower%20web/en/tour/wres/shelter/index.htm) which indicates the percentage reduction in wind speed in the leeward side of an obstacle. The parameters of the proposed scheme have been considered at differing wind speeds utilising this model."	2.27	The applicant couldn't open the link provided. However, this modelling method isn't considered appropriate (refer to further details in 2.28 below (the 'second' time paragraph 2.28 is used). In summary, this method is considered less rigorous than the CFD modelling undertaken by the applicant.
2.28	"It is noted that in the RWDI report, building heights of 34m have been utilised, with the applicant advising the Club that this figure was used in the model "to ensure there was a conservative bias adopted in the assessment." (see post meeting note in Appendix 1). The Club note that the height selected for the RWDI assessment outweighs that identified in the parameters plan. Such an approach effectively deflects the wind at a greater height, and this will result in dispersed impacts on the leeward side. Consequently, this approach generates a result which favours the applicants' assertions."	2.28	The applicant doesn't understand this point. It is not clear how a greater height of buildings would result in lesser effects. Also this is inconsistent with the case made for the Club at paragraph 2.7, which asserts that taller buildings have greater effects.  This also means that it is not at all obvious what actions the Club consider would mitigate any effects – higher or lower buildings?



2.29	"Greensforge Sailing Club have utilised the Wind Shadow calculator to demonstrate what the impact of the proposed development would be at higher wind speeds/Specific inputs include assumptions of a 30m high building extending 50m in width, at wind speeds of 9, 15 and 20 knots, thus reflecting a range of typical conditions that will be found should the development proceed. A height of 10m has been assumed to represent the top of a mast – although this is a maximum height above the water level that could be expected for dinghy sailing. Whether or not the resultant impact would be greater with buildings of lower height has not been determined, although considered possible."	2.29	This approach is not modelling Calf Heath Reservoir, it is modelling an open reservoir with no existing obstacles around it which is not the case for the location in question. In reality this reservoir is already significantly affected by substantial tree screening.
2.28	"The results are shown in Appendix 2 and are summarised in the table below. In short, the numbers on the grids shown in Appendix 2 represent the percentage of the original wind speed that will be achieved once an obstacle is put in place compared to that prior to its installation. Where the figures are blank there is insufficient wind to be measured."	2.28	(Paragraph 2.28 is used twice in the document, this response refers to the second time 2.28 is used)  The applicant's wind specialists are not aware of the method proposed. However, a version of the calculator was found following an internet search.  The data in Appendix 2 appears to be a simple analytic correlation which assumes an incoming wind speed profile that is disrupted by a rectangular obstacle perpendicular to the flow.  However there are some points to note, the guide to the calculator states that results will be inaccurate if the turbine is within 5 heights of the obstacle which means the stated 114m figures are too close to be reliable.  Furthermore, two of the tables in Appendix 2 refer to loss in wind energy while the first table is reduction in speed. This is important because wind energy scales with speed to the power of 3. This means that small changes in wind speed will create large energy reductions (i.e. 1/2 the speed results in 1/8 the



			energy). The reason for this difference is unclear, but it means that the computations using these two tables is incorrect.  This method is considered less sophisticated than the CFD modelling undertaken by the applicant, which models actual wind conditions on the reservoir using empirical data and taking account of obstructions and other characteristics.
2.29	"The above evidence clearly shows that that at greater wind speeds the distance impacted by an obstacle increases. In short, in higher wind speeds, a greater proportion of the reservoir will be impacted. The utilisation of low wind speeds in the RWDI model fails to recognise this."	2.29	(Paragraph 2.29 is used twice in the document, this response refers to the second time 2.29 is used)  The RWDI report (REP4-013) used the 80th percentile, which means that only 20% of the conditions will be above this percentage. That is reasonably high, not low.
2.30	"The applicant's assertion that considering differing wind speeds is arbitrary to the study on the basis that it would not result in any impact on the patterns of windflow are therefore incorrect.  Additionally, this assessment demonstrates that consideration of relatively light wind-speeds only does not adequately assess the full impact on sailing conditions, and that at higher wind speeds, the impact of the proposed development will be worse than the applicants have asserted."	2.31	The RWDI ambient wind speeds are based on the 80 <sup>th</sup> percentile, therefore reasonably high. They account for the majority of wind conditions and are likely to identify worst case effects.  For each wind direction and location the local wind speed has been divided by the ambient to give it's ratio to ambient. It is based on the knowledge that for the purposes of the assessment that the wind environment can be scaled with wind speed.  At any other ambient wind speed, the local wind speed is calculated by multiplying that ratio by the new ambient wind speed. Therefore, the properties of the flow patterns are the same regardless of wind speed. As the RWDI CFD data was run at a relatively high wind speed (80 <sup>th</sup> percentile), the characteristics will be directly related to a relatively high wind speed. Based on this assertion, it will over predict the wake for the lower wind conditions.



ASSES	SSMENT OF SAILING QUALITY		
2.32	"The report indicates that the 'baseline' average sailing quality on the reservoir is calculated/scored at 19.7%, and considers this to be relatively low, but not uncommon for inland sailing locations. It is not clear how the baseline calculation has been made, but when compared to a significant expanse of open water with uninterrupted wind, it is accepted that sailing conditions at Greensforge Sailing Club are not ideal."	2.32	The calculation is the summation of the sailing quality percentage values at each location (5m by 5m grid points) as a percentage of time when the wind is from the SSE-W that the various criteria are satisfied, all divided by the number of location points.
2.36	"Irrespective of other sailing locations locally, the number of people regularly attending this sailing club to participate in sailing is the clearest indication that the conditions on site are suitable to maintain an active club over a long period of time. The implied requirement for perfect sailing conditions are therefore not a precursor to sailing enjoyment - indeed, it is the imperfection in the sailing environment that generate enjoyable sailing experiences."	2.36	This rather makes the applicant's point. There is another, larger sailing club available immediately across the motorway with more open water – but members choose to use Greenforge Sailing Club notwithstanding its significant limitations. The wind is already significantly screened by extensive tree cover but nevertheless popular with its members. The effect of the application proposals would be modest and would not fundamentally change the nature of the reservoir's sailing experience.
REDU	ICTION IN SAILING QUALITY		
2.40	"In summary, therefore, the Wolfson Unit report indicates that there will be a reduction in sailing quality overall by approximately 20%, that the useable sailing area impacted will be 10 – 15%, and that it is most likely to occur in what is currently considered to be the best parts of the	2.40	These are not the figures in the Wolfson report (REP4-012) – see the report or the note provided to support the applicant's answer to EXQ2.13.5 (Document 15.1, Appendix 12, REP5-005).
	reservoir in which to sail."		The total percentage of 'good' quality time is based on total time available. i.e. days lost per month or year. In this case 0.51 - 0.66 days per month of increased poor quality conditions when all wind directions taken into account.



2.42	"The applicants' assertion has arisen as a result of an incorrect mathematical calculation, which merely considers the difference between current average and expected average sailing quality as calculated in Table 6 of the Wolfson Unit report. This mathematical error fails to consider what the difference in those two numbers represents as a proportion of the current sailing conditions, and thus underrepresents the impact of the development. By the Wolfson Units own parameters, the impact of the reduction in average sailing quality is significant."	2.42	There is no mathematical error. The results are faithfully reported in the Wolfson report and in the applicant's response to EXQ2.13.5.  Those results also only relate to the percentage change of total available time (when the wind is from SSE - W). The report also includes the proportional relationships in Table 1 (REP4-012) for clarity.  The difference in averaged sailing quality is considered to reflect the loss of availability of good sailing conditions which directly relates to the reduction in time (or effectively days lost of best sailing conditions). Taking the proportional relationship approach to the extreme, if only 1 day a month possessed 'good' sailing quality and this reduced to 0.75 day a month, this would be considered significant under such an approach.  The approach is also conservative, as it has not taken into account the conditions when wind blows from other directions (i.e. 47% of the time).
IMPA	ACT OF SAILING QUALITY REDUCTION ON SAILING ENJOYMENT		
2.43	"It is noted that the Wolfson Unit report has considered the impact on sailing conditions and the potential impact that would have on novice sailors. However, the assessment has completely failed to consider what impact this would have on more experienced sailors, who make up a significant part of the Club membership."	2.43	The Club has presented no assessment of its own. Despite the length and tone of its response, it does not significantly dispute the outcome of the applicant's quantitative assessment — choosing instead to present those figures in a different way.
			The novice cohort is considered most sensitive to any changes which is why the assessment focused on this group. The before and after comparison in Wolfson Unit's Figures 6, 7 and 8



			confirms the modest nature of the projected effects across the entire reservoir, which is considered relevant for sailors of all levels of experience.
2.45	"Similarly, sailing in lighter winds also frustrates more experienced sailors, who generally require stronger winds. Whilst the impact of greater wind speeds has not been analysed as detailed above, the evidence utilised from the Danish Wind Industry Association indicates that there is likely to be a significant reduction on higher wind speeds. Consequently, experienced sailors will not be able to realise previously achieved wind speeds. The impact of light wind speeds to the experienced sailor represents the difference between "sailing' and "floating" which will also give rise to significant de-moralisation and frustration."	2.45	Refer to response 2.7 above, which outlines that existing obstacles haven't been considered by the method proposed.
MITIC	GATION PROPOSALS		
2.47	"The assertion from the applicant that the impact on sailing conditions on the reservoir is negligible arises from an error in mathematical calculation, and consequently the wrong conclusion is drawn as a result. The analysis undertaken on behalf of the applicants consistently show that there will be a reduction in sailing quality over Calf Heath Reservoir, and as shown above, the details in the Wolfson Unit report indicate, that the overall impact of the proposed development is anticipated to be significant."	2.47	Refer to response to 2.42 above.
2.49	"Despite this, the applicant has not yet provided any details regarding any proposed mitigation which would overcome the identified impacts,	2.49	It is not clear from the club's response what mitigation it considers would be appropriate.



2.50	"This issue was discussed at the meeting on 20th May, when the Club asked if consideration could be given to locating buildings of greater height in other parts of the application site in order that the impact on sailing could be mitigated. It is noted that the applicant declined to consider this, stating that building heights would need to be determined by occupier requirements and had been informed by the visual impact strategy."	2.50	It is important that the WMI project, which proposes nationally significant infrastructure to meet a long acknowledged regional and local need is not unnecessarily handicapped in its ability to respond to market requirements. In the light of the modest effects of the scheme the Applicant does not propose to change its application. This approach is consistent with the principle set out at paragraph 5.159 of the NPS.
2.51	"The Club was not party to the conversations relating to the development of that Strategy, and it is considered likely that the impacts that arise from that strategy were not fully assessed at the time it was undertaken. Whilst the applicants ultimately agreed to consider the issues raised on 20th May, to date no alternative proposals have been put forward."	2.51	See above.  The applicant received representations from Greensforge Sailing Club during the consultation process and committed to undertake a desk based study on the potential impact of the Proposed Development on sailing quality at Calf Heath Reservoir, in response to concerns from Greensforge Sailing Club. The results of the desk based study have been considered fully. Subsequently the desk study findings have been further developed, based on additional assessment works undertaken by RWDI (REP4-013) and Wolfson Unit (REP4-012).
2.53	"It is a key principle of the planning system to ensure that where significant negative impacts are identified, appropriate action is secured through the consenting process to ensure those negative impacts are not realised. Should the Consent Order be granted as currently proposed, and the negative impacts realised on the sailing club at a later date, there is no recompense for the sailing club. We believe that this would be an unfair outcome for present and future sailors."	2.53	The assessed effects are not such as to warrant further restrictions on the built development proposed at WMI, where building heights are already proposed to be reduced adjacent to the reservoir.

### Cross Britain Way

The West Midlands Rail Freight Interchange Order 201X

Four Ashes Limited





## APPENDIX 3 CROSS BRITAIN WAY



Figure 1: Macmillan Way - Cross Britain Way (source: the Long Distance Walkers Association)



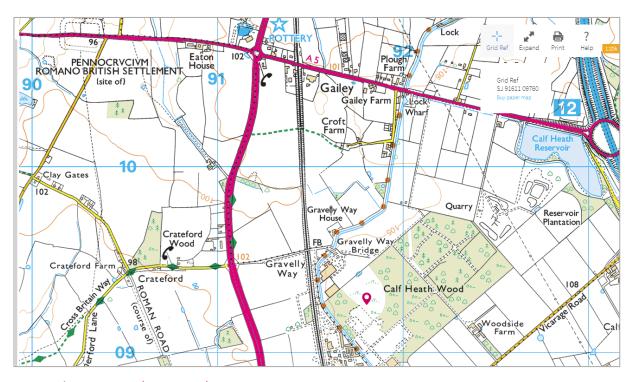


Figure 2: OS Online Mapping (source: OS)

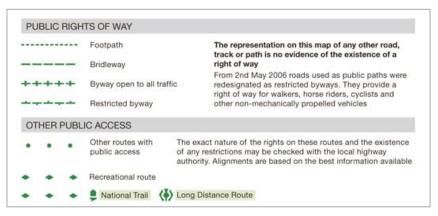


Figure 3: OS Key