## Appendix 12: Table 8 - Section D (Clapham Green to the Eversdens)

## **Matter Raised**

A considerable number of respondents supported Alignment 6 as they believe it will have less general impact on the local environment because of the more direct route. Many of these respondents expressed support for the alignment because of less requirement for viaducts and embankments, which would reduce the environmental impacts of the route. These respondents also claimed this would lessen the visual, air quality and noise impacts of the proposed train service. A few also comment on the 'brownfield sites' which could be developed along this alignment. Several respondents expressed support on conservation grounds, claiming that a shorter route would be better as it would be likely to have a reduced effect on wildlife habitats and woodlands in the area. Several respondents similarly remarked that this alignment would cross less flood plain than other route alignment options.

## **EWR Co Comments**

Support due to less priority habitat destruction, damage to nature reserves, and disturbance to wildlife from construction and operation. EWR Co considers the importance of environmental sustainability in the activities and the decisions made to ensure that the scheme is designed, constructed, operated and maintained in an environmentally responsible manner that reduces negative environmental impacts. EWR Co is determined to be an industry leader on environmental sustainability across the whole life cycle of the Project. EWR Co aims not just to reduce impact but to realise opportunities to enhance the environment in line with the Government's 25 Year Environment Plan and EWR Co's own vision for the East West Rail project. EWR Co aims to protect and enhance the natural and historic environment; to be a net zero carbon railway; to ensure the resilience of the infrastructure; and to contribute to the wellbeing of communities and customers. Constructionrelated impacts on the environment will be identified and managed, as far as reasonably practicable, by a Code of Construction Practice (CoCP) or an equivalent document submitted as part of a Development Consent Order (DCO) application. This will include measures to control impacts related to construction noise and vibration, air quality, contaminated land, ecology, historic environment, construction traffic, tree protection, surface and groundwater management, waste management and general site operations. In addition, it will state permissible contractor working hours. EWR Co's teams will continue to engage with local people and communities to understand the arrangements which are least disruptive to people's lives and businesses and will ensure that appropriate measures are in place to protect the flora and fauna of the corridor through which construction works will take place. Often this will involve the use of physical barriers and occasionally it will require the relocation of species to an alternative location. As highlighted by respondents, Route Alignment 6 represents a major improvement relating to ecology and biodiversity when compared to the Reference Case (Route Alignment 8). Route Alignment 1, an emerging preferred option at NSC, would be a minor

improvement on the Reference Case and so overall does not perform as well as Route Alignment 6 to this regard. Looking at air quality, both Route Alignments 1 and 6 bring the alignment closer to residential properties on the A1 in Chawston than the Reference Case (Route Alignment 8). Overall, there will be fewer properties impacted from Route Alignment 1 than by Route Alignments 6 and 8. Route Alignment 1 would also require a lower volume of earthworks compared to the Route Alignments 6 and 8. Overall, Alignment 6 is considered to be a minor improvement in relation to air quality compared to the Reference Case, with Route Alignment 1 representing a major improvement to this regard. Turning to climate and emissions, Route Alignment 6 results in a slight increase to track length required and therefore a slight increase to Green House Gas (GHG) emissions compared to the Reference Case. Route Alignment 6 results in a decrease to the bridge and viaduct areas required compared to the Reference Case which in turn results in a decrease to the associated GHG emissions. Route Alignment 6 results in a decrease to the GHG emissions associated with earthworks. Overall, Route Alignment 6 results in a lower carbon footprint (approximately 27% saving) and therefore a major improvement compared to the Reference Case. Route Alignment 1 would result in approximately a 32% saving and would also constitute a major improvement. With regard to landscape and visual impacts, Route Alignment 6 performs similarly to Route Alignment 1, as both have notably fewer landscape impacts that the Reference Case (Route Alignment 8) as they avoid impacts upon landscape designations such as Brickhill Country Park. Both Route Alignment 1 and 6 have similar levels of visual impact as the Reference Case, but on different receptors. Route Alignments 1 and 6 have high impacts on Chawston due to the A1 viaduct. Without any mitigation, Route Alignment 6 has the potential to create adverse noise impacts at the following communities: Clapham East, Clapham Park Wood, Woodlands Park, Graze Hill, Ravensden North-west, Lower Grange / Sunderland Hill, Wilden, Chequers Hill North, Wilden East, Duck's Cross, South Brook, Colesden, Spinney Road, Chawston, Chawston East, Abbotsley, Caxton, Lower Cambourne, Great Cambourne, Crow End, Caldecote, Kingston, Little Eversden. However, it is predicted that with appropriate mitigation, the

communities subject to adverse noise impacts would reduce to: Graze Hill, Lower Grange/Sunderland Hill, Colesden, Spinney Road, Chawston, Crow End. Route Alignment 1 would adversely impact the same locations as Route Alignment 6, apart from Crow End, and would additionally impact Wintringham Hall, Highfields and Highfields Court. Both Route Alignments 1 and 6 would represent an improvement on the Reference Case (Route Alignment 8). All route alignment options would include some levels of adverse noise impacts to existing settlements, and this was not a key differentiator in the decision to choose the emerging preferred options for NSC. Regeneration, and the unlocking of Brownfield sites, was a consideration under assessment factor 2 (contribution to enabling housing and economic development). It is anticipated that a Cambourne North station would be a slightly better performing option for housing and development compared to Cambourne South. Therefore, Route Alignments 1 and 9 (which serve Cambourne North) perform better than Route Alignment 6 (and Route Alignments 2 and 8) to this regard. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, and also serves Cambourne North. EWR Co is following the environmental mitigation hierarchy by seeking to avoid significant adverse effects on woodland and ancient woodland and where this isn't possible, seeking to reduce and mitigate impacts and if necessary, looking at compensation. At this stage the Project is primarily focused on trying to avoid and reduce impact, by making decisions that help 'design out' the potential for environmental impacts. So, for example, as a result, all alignments have avoided direct impacts on key national features including known ancient woodland. The Project has committed to delivering biodiversity net gain which requires that habitats for wildlife are enhanced and left in a measurably better state than they were pre-development which includes woodland. The impact of Route Alignment 6 on ancient woodlands is considered to be an improvement on the Reference Case (Route Alignment 8). Route Alignment 6 would clash (within 50m buffer) with two ancient woodlands, with the Reference Case clashing with eight. Route Alignment 2 and Route Alignment 1, an emerging preferred alignment at NSC, would avoid clashes with any ancient

woodlands, and perform best of all route alignment options to this regard. Route Alignment 2 is further from the Little and Great Early Groves woodlands than the reference case Alignment 8. Route Alignment 2 is further from the Little and Great Early Groves woodlands than the reference case Alignment 8. We do not anticipate that Alignment 2, 1 or our preferred alignment, Alignment 1 (Tempsford variant) would directly impact Little or Great Early Grove. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts and will continue to consider how we can best avoid impacts on these woodlands as we develop the design.

Flooding: EWR Co takes climate change and the future risk of flooding seriously and will continue to develop its approach to understanding and mitigating any project-related risks linked to climate change. This includes considering changes to climatic conditions and extreme events within the design of the project. It is correct that Route Alignment 6 would cross a shorter length of floodplain that some other route alignment options, particularly compared with the Reference Case (Route Alignment 8) which would include a long crossing of the Great River Ouse floodplain. Route alignment options that route via St Neots perform better in this regard as these station location options have a reduced flood risk compared with those which serve a Tempsford station. While it's true that Route Alignment 6 performs well with regard to flood risk, Route Alignment 1 (an emerging preferred option at NSC) performs similarly in this regard. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant) as part of the statutory consultation.

A considerable number of respondents believe that Route Alignment 6 would have a negative impact on traffic in the area. Specific roads which respondents identified include the A1 and the A428, and particularly where they meet at St Neots. Several respondents claimed that this road is already congested, and that increased traffic brought about by construction, as well as the proposed station at St Neots South, could exacerbate this. Several respondents also claimed that the route would divide paths used by recreational walkers to access heritage sites.

Disruption to rights of way: as mentioned in section 4.2.2 of the Consultation Technical Report, EWR Co has considered the impact of the Project on existing highways, PRoW and private access roads as part of the design and assessment of route alignment options for the new railway between Bedford and Cambridge. EWR proposals for Public Rights of Way (PRoWs) will be designed to the latest standards that will maintain or increase safety and security for walkers, cyclists and horse riders. Information about the design standards will be provided in the Design Approaches. During construction, EWR will seek to reduce impacts on PRoWs. Where a PRoW is affected, EWR will consider options that include closing the route temporarily, providing a temporary diversion, or opening an alternative permanent route before the existing one is closed. How the impacts are mitigated will depend on factors such as the type of works in the area and the safety and security implications. Vehicle access to stations: EWR will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. This assessment will include consideration of local and strategic roads including the A1 and the A428. In relation to the accessibility of station locations, one of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. St Neots station locations (Alignment 1-6) are closer to St Neots and thus more accessible by bike and also provides a minor improvement for public transport users as closer to St Neots so improved journey times. Should Alignment 6 have been chosen as the preferred alignment EWR Co would consider, alongside local councils and Network Rail, how to provide the best method of connecting a St Neots EWR station with the current town and local

communities. The objective will be to minimise impact on St Neots and surrounding villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. EWR Co stations will provide pick up and drop off areas for people to access the station building easily, free of charge. More information on station designs will be made available at statutory consultation.

Road diversions/damage: Design is still under development. EWR Co will continue to assess the potential impacts of the Project on existing road network during construction stage. EWR will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. Roads used for EWR construction traffic will be reviewed prior to commencement of major works. To avoid damage, where roads are of insufficient strength or in a poor condition, the highway will be brought up to the relevant standard or alternative roads will be used. EWR will prepare a Traffic Management Plan (TMP) for approval following consultation with the relevant highway authority or other bodies. The TMP would include measures aimed at maintaining safety for road users and reducing the impacts of construction traffic, such as setting out the timing of traffic management measures. EWR Co is working closely with key stakeholders including National Highways and other projects in the area including the A428 to manage interfaces and explore opportunities between these projects. Regarding the A1 - Route Alignment 6 would cross the A1 at the same point as emerging preferred alignment Route Alignment 1. The preferred alignment, Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, would cross the A1 south of the Black Cat Roundabout. Regarding the A428, we are in contact with National Highways and their design and build contractor to develop a safe and sound structure. We acknowledge that our preferred alignment Alignment 1 (Tempsford variant), crosses the A428's proposed scheme and will design a solution that can be safely constructed

with minimal disruption. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. To assess the environmental impacts of the construction and operation of the Project, an Environmental Impact Assessment will be carried out. This will be included in the Environmental Statement (ES) that accompanies the consent application. During the preparation of this assessment, mitigation requirements may be identified and incorporated into the proposals, either as mitigation that is embedded within the design and secured by the Design Approaches, or as mitigation within the Code of Construction Practice (CoCP) or an equivalent document.

Division of paths and access to heritage sites: EWR Co has taken account of the impacts of the shortlisted route alignments options on Public Rights of Way (PRoW). As detailed in the Consultation Technical Report Appendix E – Project Section D Assessment Factor Tables (East West Rail, 2021), impacts to the community (assessment factor 14.4) includes disruption to PRoWs. Crossing public rights of way is inevitable for all alignments. All crossed PRoW are assumed to be maintained or diverted via a suitable alternative, meaning that this is not a matter that favours one route alignment over another – all are assessed to perform neutrally in comparison with the Reference Case (Route Alignment 8). Impacts upon access to the historic environment was not one of the environmental assessment factors. However, as all public rights of way are assumed to be treated as described above, this does not assist in differentiating between route alignments.

A considerable number of respondents claimed that Alignment 9 would have the fewest negative visual impacts on the surrounding landscape and countryside of the route alignment options. Most of these respondents claimed that the reduced length and number of required cuttings for this alignment would reduce its visual impacts more than other route alignment options, as would its lower number of raised elements. Several respondents also claimed that Alignment 9 avoids village centres along the route, reducing the perceived visual impact due to being further away from where people live.

Potential visual and landscape impacts were also taken into consideration as part of the environmental appraisal. While Route Alignment 9 would have a lesser impact on Cambourne, Wimpole and Eversden, the assessment identified that Route Alignment 9 would impact a number of landscape areas, including Brickhill Country Park, the River Great Ouse valley, All Angels Park and trees lining Bourne Brook. Although Route Alignment 9 (along with the other emerging preferred alignment at NSC, Route Alignment 1) would require the longest track lengths, both route alignments have fewer structures

A small number of respondents also remarked that this alignment would avoid specific beauty spots, such as Bourn Valley, which would also reduce the potential visual impact.

associated with them compared to the Reference Case (Route Alignment 8). Since consultation, EWR Co has also been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. EWR Co is considering how the development can be designed to blend in with the local environment through measures such as landscaping and screening to reduce visual intrusion. Consideration will be given to the setting and context of historic and cultural assets including conservation areas, archaeology, listed buildings and structures, historic views, and landscapes. Route Alignment 9 would avoid impacts to a number of communities, including Caxton, Bourn, Abbotsley and others, while also avoiding the complex heritage resource of the Bourn Valley. While it will still impact some existing settlements and communities, EWR Co believes that following the existing travel corridor for a longer distance (as demonstrated by the emerging preferred alignments at NSC, Route Alignments 1 and 9) will reduce these impacts. In comparison Alignment 1 has minor improvements compared to the reference case, avoiding impacts upon landscape designations at Brickhill Country Park, the River Great Ouse Valley and indirect impacts upon the character of Roxton Park. Alignment 1 does however result in some areas of woodland loss in addition to the reference case. As discussed in the evaluation of assessment factor 14.11 in Appendix E of the Technical Report, Route Alignment 9 was judged as neutral for combined landscape and visual impacts in comparison to the reference case (Route Alignment 8), and the emerging preferred alignment, Alignment 1 was judged as minor improvement as it avoids indirect impacts upon the character of Roxton Park. Both Alignment 9 and 1 were considered to be minor improvements in comparison to the reference case (Route Alignment 8) for Community Impacts (assessment factor 14.14) due to requiring a lower number of property demolitions than the reference case (Route Alignment 8).

A considerable number of respondents claimed, with specific reference to Cambourne Country Park, Renhold and Ravensden, that this route alignment option would have fewer negative visual impacts than other route alignment options. Many respondents also felt that this alignment would have less

Visual impact: although for the Landscape and Visual Assessment Factor Alignment 1 was considered as a minor improvement as it would have notably fewer landscape impacts than the reference case, with regard to visual impact, Route Alignment 1 would be expected to have a similar level of impact as the Reference Case (Route Alignment 8). However, Route Alignment 1 (and Route

impact on the surrounding countryside, as the route would be further from recreational footpaths that they use regularly.

A considerable number of respondents expressed concern about access to amenities in the area. Several remarked that this route might make it harder for children to get to school. Some others state that recreational areas, such as Bourn Golf Club, as well as historic landmarks in the area could be lost or made less pleasant to visit due to the line. Several respondents also commented that countryside activities, such as horse-riding and walking, may also be made less enjoyable by proximity to the line.

Alignments 2 and 9) offer the ability to concentrate impacts in the A428 corridor, rather than in areas not already subject to development. Sharing a transport corridor may also provide an opportunity to combine landscaping and other environmental mitigation measures. Route Alignment 1 would have reduced visual impacts on communities such as Renhold, Cambourne Country Park, Caxton Village, Bourn. It also passes to the north of Ravensden. Route Alignment 1 also avoids impacts on landscape designations at Brickhill Country Park, the River Great Ouse valley and indirect impacts on the character of Roxton Park. Overall, Route Alignment 1 is therefore considered to be a minor improvement in terms of landscape and visual impact (assessment factor 14.11) compared to the Reference Case. EWR Co will consider how the scheme can be designed to blend in with the local environment. Assessing the impact of the Project on the environment is a fundamental part of the design of the scheme's development, including possible mitigations. This includes consideration of landscape and visual impacts. EWR Co will develop a PEIR which will include information regarding the landscape and visual baseline, preliminary construction and operation assessment of impact on landscape character and views. Zone of Theoretical Visibility will be produced to inform extent of views. This will be presented at statutory consultation with a full Environmental Statement being submitted as part of the DCO application.

EWR Co has taken into account the potential impact to amenity impacts to community facilities, including Bourn Golf Club, along the routes. However, this is expected to be similar for all route alignment options and was assessed as neutral for each and, as such, is not a differentiating factor (assessment factor 14.4). In addition to the temporary measures which EWR Co will enforce during the construction of the works, the longer-term environmental impacts will also be considered in the design solution. The design of the works, therefore, will consider specific measures such as landscaping and screening to minimise the impact of the Project on the surrounding environment during operation. During construction, EWR Co will aim to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities such as schools. Arrangements for any diversions will involve discussion with appropriate

parties at relevant stages with the aim of both mitigating disruption to the local community and enabling reasonable conditions for the progression of the works. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoW and private access roads at the statutory consultation. EWR Co appreciate the concerns around the impacts on the countryside and will work to identify and reduce impacts and protect the countryside wherever reasonably practicable. We recognise that the countryside, parks and green spaces, and access to them is important and will work to reduce impacts. To help reduce impacts, we are following the environmental mitigation hierarchy by seeking to avoid significant adverse effects on the countryside and where this isn't possible, seeking to reduce and mitigate impacts and if necessary, looking at compensation. At this stage we are primarily focused on trying to avoid and reduce impacts, by making decisions that help us 'design out' the potential for environmental impacts. As part of the environmental appraisal detailed in Appendix E of the NSC Technical Report, EWR took into account the impact on the Historic Environment (assessment factor 14.9), including impact to listed buildings, Scheduled Monuments and conservation areas. The appraisal found that Route Alignment 8 would have an adverse impact on the complex heritage resource area of the Bourn Valley, and would route within 1km of approximately 232 listed buildings, the most of all route alignment options. By routing along the A428 travel corridor, Alignment 1 (an emerging preferred alignment at NSC) and the preferred Alignment 1 (Tempsford variant), would have a reduced impact on heritage assets and properties. This was a differentiating factor in the decision to choose the preferred route option. As stated in paragraphs 9.6.21 – 9.6.38, a station at Cambourne South (as per Route Alignment 8) would require a greater level of mitigation than a station at Cambourne North to protect environmental and heritage assets in the area, including Scheduled Monuments and listed buildings, areas of woodland and priority habitat and county wildlife sites and Cambourne Local Nature Reserve. From a planning perspective, this would place greater constraints upon development at Cambourne South.

A considerable number of respondents expressed concern about Alignment 8 due to its end points at Tempsford station and Cambourne South station, as well as the subsequent southern approach into Cambridge. Several respondents claimed that the Cambourne South station would be more disruptive to the people in Cambourne, taking up open spaces to the south of the town and disrupting roads. Many expressed concern over the station at Tempsford South, stating that the village is too small to warrant its own station, and that one at St Neots would be more useful.

Cambourne South Station – information provided. During the second nonstatutory consultation, EWR Co was still at an early stage of the planning process where not all engineering details or environmental survey information, including further details on the proposed station locations, were at a sufficiently developed stage to be consulted on. For the second nonstatutory consultation, EWR Co undertook high-level assessments of the following factors to understand the potential of each station location for housing and economic growth: • The availability and suitability for development of land within close proximity to potential station locations and any constraints (for instance environmental considerations such as flooding or heritage assets); • Placemaking opportunities and constraints. • Relevant information from local plans and related local planning documents; and • Socio-economic factors. The findings from these high-level assessments were summarised in Technical Report in paragraphs 9.6.21 – 9.6.53, with discussion of the Cambourne South and North station locations found in paragraphs 9.6.21 – 9.6.38. Overall, EWR Co considers alignments serving Cambourne North (the NSC emerging preferred Route Alignments 1 and 9, and preferred Alignment 1 (Tempsford variant)) as being likely to perform better in relation to housing and economic growth than those serving Cambourne South. EWR Co's preferred alignment, Alignment 1 (Tempsford variant), would also serve a station at Tempsford where there is greater potential for development to support economic growth than at St Neots. Further information will be presented on this at the statutory consultation. There will be significant planning work for each of the stations/local areas in the subsequent design stages in collaboration with local planning authorities. When designs for the proposed stations have been completed, these will be assessed against various factors. Further information will be provided during future stages of consultation.

Cambourne South – environmental and development: While there would be inevitable environmental impacts associated with all route alignments and proposed station locations, there are several environmental and local heritage areas that have been identified in the vicinity of Cambourne South. As stated

in paragraphs 9.6.21 – 9.6.38, a station at Cambourne South (as per Route Alignment 8) would, when compared to a station at Cambourne North, require a greater level of mitigation to protect environmental and heritage assets in the area, including Scheduled Monuments and listed buildings, areas of woodland and priority habitat and county wildlife sites and Cambourne Local Nature Reserve. From a Planning perspective, this would place greater constraints upon development at Cambourne South than at Cambourne North. Alignments serving Cambourne North (Route Alignments 1 and 9, the preferred alignments at NSC) are therefore currently assessed as likely to perform better in relation to housing and economic growth than alignments serving Cambourne South (Route Alignments 2, 6 and 8). A station at North Cambourne would also not be expected to constrain development to the north of the A428, although it would be separated from Cambourne. As all proposed route alignments and their associated stations would result in new elements in rural landscapes, EWR Co is considering how the development can be designed to blend in with the local environment through measures such as landscaping and screening to reduce visual intrusion. Consideration will be given to the setting and context of historic and cultural assets including conservation areas, archaeology, listed buildings and structures, historic views, and landscapes, and this would have included consideration of Bourn Windmill had Alignment 8 been chosen as a preferred option. EWR Co will seek to develop the landscape design to respond and reflect those features which make up the landscape character. Route Alignment 8 would be likely to result in several adverse impacts on water resources, in part due to its crossing of a groundwater Source Protection Zone (SPZ) south of Cambourne. This could potentially lead to adverse impacts on water resources because of the potential for contamination of the SPZ. Route Alignments 2, 4 and 6 that also serve Cambourne South, also cross the SPZ. Cambourne South impact on settlements, noise and vibration Due to the scale and nature of EWR, impacts on communities is inevitable and all route alignment options would impact some local villages and communities. Assessment factor 14.4 (Community) considered the impact of each route alignment on communities, including the number of potential demolitions required for each alignment. Route

Alignment 8 would require the demolition of eight properties, most of which are located around Broadway, Bourn. It would also impact settlements such as Renhold and Abbotsley, and there would likely be adverse noise impacts for residential properties in Ravensden Church End, Woodend Lane, Bedford Road and Crow End as a result of Route Alignment 8. EWR Co considers that impacts on communities could be reduced by routing EWR close to the existing travel corridor of the A428, as this would allow some adverse impacts to be concentrated in this corridor rather than in areas not already subject to development. This is reflected in the number of properties impacted, with Alignments 1 and 9 (the emerging preferred alignments at NSC) requiring the fewest demolitions (4 and 3 respectively) and Route Alignment 8 requiring a higher number (8). Alignment 1 would also affect a fewer number of residential properties regarding noise and vibration impacts (assessment factor 14.14). Route Alignment 1 is therefore considered a minor improvement compared to Route Alignment 8, in terms of community impacts (assessment factor 14.4) and noise and vibration (assessment factor 14.13). Cambourne South – road networks and traffic impacts EWR Co considered the accessibility of all potential station locations. Both proposed station options in Cambourne would be located close to existing communities. Cambourne North station is separated from Cambourne by the A428 which may slightly reduce connectivity to the existing settlement, compared to Cambourne South, particularly for active travel options such as walking, wheeling and cycling. However, this could be mitigated by a foot and cycle bridge over the A428. The development of first mile/last mile strategies will also be considered for any preferred option to mitigate such matters. This was therefore not considered to be a differentiating factor. EWR Co will work with local authorities and transport bodies to ensure public transport connectivity and the ability to use new and improved active travel – walking, wheeling and cycling – modes are appropriately considered in the development of our station designs. Traffic and the potential for congestion around stations is expected to be broadly similar for all station location options and will be further examined at the next stage of design. When the final route alignment has been chosen, EWR Co will prepare a Transport Assessment to consider the impact on the strategic and

local highway networks, road safety, and local sustainable modes of transport, including public transport. This will form part of both the Preliminary Environmental Information published at statutory consultation and the Environmental Statement that is submitted as part of the DCO application. It is important for the new railway to complement other local transport initiatives and infrastructure without duplicating them. Trams or buses can offer the opportunity for customers to access local destinations while EWR would provide quick, direct links to key regional locations and transport interchanges including Cambourne and Cambridge stations. In this respect, the new railway and local transport modes would be able to complement each other. All alignments would in principle be able to provide these connections which means that it is not a differentiating factor in our decision.

Flooding concerns: Route Alignment 8 would have a relatively long crossing of the River Great Ouse flood plain, while also crossing an area of flood risk at Tempsford and a groundwater Source Protection Zone (SPZ) south of Cambourne. This could potentially lead to adverse impacts on water resources as a result of loss of the flood plain and the potential for contamination of the SPZ. Specifically, the proposed Tempsford station location for Route Alignment 8 is located within a flood zone and would require flood compensation at this location and flood protection measures, in addition to further mitigation to protect groundwater and surface water features including the SPZ. The emerging preferred options at NSC, Route Alignments 1 and 9, and the preferred option Alignment 1 (Tempsford variant), would avoid the groundwater SPZ south of Cambourne as a result of routing via a Cambourne North station. Route Alignment 1 is considered a major improvement compared to the Reference Case (Route Alignment 8).

Tempsford station: with regard to the station at St Neots/Tempsford, the assessment found little difference between how each would perform. EWR Co has considered the potential coalescence within the existing St Neots area. This is also considered to be a risk at Tempsford (i.e. with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk as St Neots

as the Tempsford location is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives so will be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Enabling housing growth and contributing to transformational growth within the Oxford to Cambridge area is a key part of EWR's purpose. The use of a station within St Neots is not expected to enable the same level of housing development as we anticipate would be unlocked by a new station between St Neots and Sandy, which is why the preferred location for an ECML station is south of the existing St Neots station. However, EWR is committed to increasing prosperity and connectivity across the Oxford to Cambridge area, so options to efficiently connect existing communities, such as St Neots, with EWR remains important and we will continue to develop proposals to enable easy accessibility for these communities, including through the provision of improved first mile/last mile connectivity, to our proposed network. Route Alignment 8 including Tempsford station has been assessed using the Environmental impacts and opportunities assessment factor (14) which includes consideration of Water Resources and Flooding (assessment factor 14.18). When compared to the Reference Case (Route Alignment 8) alignment Route Alignment 1, an emerging preferred option at NSC, was judged as a 'major improvement' for Water Resources and Flooding for reasons including that Alignment 1 has a shorter crossing of the River Great Ouse flood plain and routes via St Neots South Option A via the A428 which has reduced flood risk by being located nearer the sub catchment divide. It was also judged as a 'major improvement' for Environmental impacts and opportunities (assessment factor 14). The proposed Cambridge South station is not being promoted by EWR as it is a separate Network Rail project, which has recently been granted consent. EWR Co is working closely with Network

A considerable number of respondents expressed concern about impact on the local environment resulting from this alignment. Several respondents raised concerns about the wellbeing of the wildlife in the area, while several others are concerned about the potential felling of woodland. Some also raised specific concerns about the negative impact of the earthworks required on the local environment, and a few raise concerns about the potential negative impact to the area's already negatively affected biodiversity through the loss of habitats.

Rail and other projects in the area to manage interfaces and explore opportunities between these projects. For matters raised regarding the approach to Cambridge please refer to chapter 3 of the Consultation Feedback Report.

EWR Co has taken account of the environment at all levels, including the local environment. Environmental appraisals appropriate for this stage have been undertaken to give an indication of potential environmental impacts that would apply from selecting one of the route alignments. Overall, it is considered that Route Alignment 6 represents a major improvement in environmental impacts when compared to the Reference Case (which is represented by Route Alignment 8).

Pollution from freight: while EWR Co is planning a passenger route, it has been asked by the Government to accommodate existing freight services that are already running through places such as Oxford, Bicester, the Marston Vale Line and Bedford and to make provision for potential future freight demand. As stated in section 3.10 of the NSC Technical Report, the maximum gradient of the railway would be no steeper than 1 in 80 to reduce the risk of freight trains running at slower speeds. The impact on operational carbon emissions has not been assessed at this stage but will form part of the next stage of assessment. As all of the route alignments are designed to the same tolerances, use by freight services is not a differentiator. For the purposes of appraising the environmental impacts of each option, the reasonable worst-case scenarios of electrification or diesel-powered trains have been used. This is to ensure that for each topic the reasonable worst-case approach is adopted when considering the impacts arising from each alignment. EWR Co takes its commitment to delivering sustainable transport seriously and is developing the scheme in line with the policy and law of the Government, such as the Clean Air Strategy. This will include considering what vehicles and equipment will be used during the construction and operation of the railway. As with all EWR Co proposals, the impact on the environment is a fundamental part of our decision-making. EWR Co considers the importance of environmental sustainability in our activities and the decisions made in order to ensure that

the scheme will be designed, constructed, operated and maintained in an environmentally responsible manner that reduces environmental impacts where reasonably possible. EWR Co is determined to be an industry leader on environmental sustainability across the whole life cycle of the Project. EWR Co aims not just to reduce impact but to realise opportunities to enhance the environment in line with the Government's 25 Year Environment Plan and EWR Co's own vision for the East West Rail project. Design of the works, therefore, will consider specific measures to reduce the impact of the Project, including those associated with potential future freight operations, on the surrounding environment during operation, including on community well-being and health. For example, the use of landscaping and screening could reduce visual intrusion, and bunds or noise barriers could be used to reduce noise impacts.

Wildlife and habitats/ biodiversity: EWR Co recognises the importance of biodiversity and protecting the habitats of local wildlife including priority habitats such as woodland and ancient woodland as well as parks and greenspaces. As part of EWR Co's commitment to changing the environment for the better, the company is thinking carefully about protected species and their habitats when designing the railway. EWR Co is committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts. As part of this, the Project has committed to delivering biodiversity net gain along the Oxford to Cambridge area. Biodiversity net gain requires that habitats for wildlife are enhanced and left in a measurably better state than they were pre-development. This approach supports the Government's 25-year Environment Plan. Route Alignment 6 involves a reduced overlap with the Weaveley and Sand Woods SSSI IRZ, indirect impacts to fewer ancient (or potentially ancient) woodland sites, and slightly lower impacts to mapped priority habitat areas. Minor impacts are likely to the boundary of the Cambourne Nature Reserve (but these can be mitigated and compensated locally), though Route Alignment 6 represents a major improvement to the Reference Case (Route Alignment 8). In relation to the internationally important Eversden and Wimpole Woods

Special Area of Conservation (SAC), EWR Co has undertaken an appraisal of the potential for impacts and its ability to mitigate them. Using the information available at this stage in Project development, EWR Co has concluded that the impacts on the site are capable of mitigation, although Route Alignment 6 is closer to the SAC than the emerging preferred alignments at NSC, Route Alignments 1 or 9, which is considered to favour those alignments.

Nature Reserves: EWR Co will seek to avoid or minimise direct impacts on the most sensitive nationally and internationally designated heritage assets during construction activities. Consideration will be given to the setting and context of historic and cultural assets including conservation areas, archaeology, listed buildings and structures, historic views, and landscapes. As far as is reasonably practicable EWR Co will aim to avoid harm to the setting of designated heritage assets, prioritising those of the highest sensitivity such as Scheduled Monuments, Grade I and Grade II listed buildings and parks and gardens. To do this, early identification and surveys of those assets most likely to be affected will be carried out so the scheme can be designed to avoid these and where this is not possible, incorporate appropriate mitigation measures into the design.

Impact of earthworks: the design solution will consider the longer-term environmental impacts of the scheme, and EWR Co will seek to include specific measures within the design to reduce the impact of the Project on the surrounding environment during construction and operation. EWR Co has taken into account the impact of the new railway, including the presence of embankments and other earthworks. This is factored into on ecology and biodiversity (assessment factor 14.5) and as stated above, Route Alignment 6 represents a major improvement to the Reference Case. It is considered that any adverse impacts could be mitigated, and EWR Co has committed to delivering biodiversity net gain across the Oxford to Cambridge area. EWR Co will consider enhancing some existing habitats and look at opportunities to create new habitats. We will provide further information on our plans for achieving biodiversity net gain during our statutory consultation. The

A considerable number of respondents expressed concern about potential negative impacts on air quality from the line. Of these respondents, a large proportion remarked that diesel and freight trains would be particularly harmful, and several respondents specifically mentioned the effects of particulates from these trains, which they claim would be particularly harmful for children and asthmatic people in the area. Several respondents expressed concern that the raised elements of track could compound the negative effect on air quality in the area caused by the line. A small number also mentioned dust from construction, particularly from earth works, which they claim could significantly reduce air quality in the area.

environmental impact of and safety during construction and operation of the railway and its associated infrastructure will be assessed to inform the development of the design and will be presented in an early form within the PEIR at statutory consultation and within the Environmental Statement (ES)report that accompanies Development Consent Order (DCO) application. How EWR Co intends to manage the construction of East West Rail will be set out in the Code of Construction Practice (CoCP). Compliance with the CoCP will be secured through the Requirements of the DCO.

General concern of air pollution (including impact on health) In terms of air quality, Route Alignment 9 would have a neutral impact in comparison to the reference case (Route Alignment 8). Overall, there will be slightly more properties impacted from this alignment, but a slightly lower volume of earthworks required compared to the Reference Case. No AQMAs are likely to be impacted by this option. Alignment 1 (an emerging preferred option at NSC) represents a major improvement over the reference alignment in terms of air quality. EWR Co takes its commitment to delivering sustainable transport seriously and is developing the scheme in line with the policy and law of the Government, such as the Clean Air Strategy. The Project team will work with local authorities to understand the current situation in communities and how to consider relevant Air Quality Management Areas. EWR Co is also considering potential impacts on the community and how to avoid significant adverse impacts on health and quality of life, which involves assessment of air quality impacts. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include information regarding the baseline air quality environment and identification of the relevant air quality standards and targets. The likely risks from construction activities and potential impacts from operation, including identification of mitigation and control measures will also be presented as part of the PEIR which will form elements to be considered at statutory consultation. A full environmental statement will then be submitted

as part of the development consent order application and will assess changes in nitrogen oxides (NOx), fine particulates (known as PM2.5 and PM10) and dust. This assessment will follow best practice and guidance such as the guidance set by the Institute of Air Quality Management and other recognised bodies. It will also take account of the scheme design (including railway height) and the local environment, such as impact on sensitive receptors like schools. The team will seek to reduce the impact the new railway may have on air quality. This will include considering what vehicles and equipment will be used during the construction and operation of the railway, as well as how to manage work sites to avoid and reduce any dust creation which will be set out in the Code of Construction Practice (CoCP) or an equivalent document. EWR Co will encourage its contractors to make use of components which are manufactured at locations away from the construction site wherever possible, to reduce the number of activities which have to be carried out at site. This will help to minimise noise, dust and vibration while also being a cost-effective way to deliver. Where operations need to be undertaken on site, EWR Co will consider the noise, vibration, and other impacts that these activities might have and plan the work to avoid or minimise the impacts where possible. Air quality concerns re: diesel trains and freight. For the purposes of appraising the environmental impacts of each option, the reasonable worst-case scenarios of electrification or diesel-powered trains have been used. This is to make sure that for each topic the reasonable worst-case approach is adopted when considering the impacts arising from each alignment. To inform the next stage of design, including potential land requirements, the assumption is that overhead electrification may be provided for the Project. EWR Co will develop the proposed approach and provide more details on this at the statutory consultation. Further detail will also be provided on the freight strategy, and the approach to avoiding or reducing potential air quality impacts from freight trains which may run on EWR, during statutory consultation. In 2018, the Government challenged the rail industry to produce a vision for the removal of all diesel-only trains from the network by 2040 and EWR Co is committed to running a sustainable railway in the long term, with reduced emissions, including for carbon, NOx and particulates. EWR Co is aiming to deliver a net

zero carbon railway and will be considering conventional and emerging technological solutions for powering trains when all EWR services are fully operational. Operating electric trains powered by overhead electric lines is one way that carbon emissions can be reduced. It is not yet clear if other technologies are likely to be sufficiently mature by the time a firm decision needs to be taken on EWR's long term fleet and so it is not yet known whether such conventional electrification is required.

Concern about increased air pollution from diesel fumes and particulate pollution: in terms of air quality, Route Alignment 9 would have a neutral impact in comparison to the reference case (Route Alignment 8). Overall, there will be slightly more properties impacted from this alignment, but a slightly lower volume of earthworks required compared to the Reference Case. No AQMAs are likely to be impacted by this option. Alignment 1, an emerging preferred alignment at NSC, represents a major improvement over the reference alignment in terms of air quality. Alignment 1 is closer to residential properties in Highfields and Chawston, but overall, there are significantly fewer properties impacted from this alignment and a lower volume of earthworks required compared to the Reference Case. EWR Co will seek to reduce the impact the new railway may have on air quality. This will include considering what vehicles and equipment will be used during the construction and operation of the railway, as well as how to manage work sites to avoid and reduce any dust creation. A full Environmental Statement will be submitted as part of the development consent order application and will assess changes in NOx, PM2.5 and PM10. This assessment will follow best practice and guidance set by the Institute of Air Quality Management. In 2018, the Government challenged the rail industry to produce a vision for the removal of all dieselonly trains from the network by 2040 and we are absolutely committed to running a sustainable railway in the long term, with reduced emissions, including for carbon, NOx (Nitrogen Oxides) and particulates. EWR Co is exploring how to introduce new and emerging technologies in its long-term train fleet and will be seeking input from bidders across the market to ensure

A considerable number of respondents expressed concern about potential negative visual impact from this alignment on the surrounding countryside. Many respondents claimed that the proposed viaducts for this alignment could have a particularly negative visual impact, as they would be tall and thus visible in the surrounding landscape, and that the cuttings would also be visually detrimental. Several also expressed concern about the negative visual impact of earthworks during construction. A small number also noted the negative impact that floodlights used during construction could have on light pollution in the area.

they understand the company's environmental goals. information about this aspect of the Project will be provided at statutory consultation.

Visual impacts, particularly elevated sections e.g., viaducts and embankments: viaducts and embankments are needed on all route alignment options. In any process of design, solutions to manage environmental impacts and cost mean that opportunities are sought to reduce the number of structures and heights of embankments. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Route Alignment 6 would result in a minor improvement in comparison to the reference case (Route Alignment 8) in relation to landscape and visual impacts. This has taken account of viaducts, embankments and cuttings, as well as at-grade sections of the proposed railway in Route Alignment 6. An emerging preference at NSC, Alignment 1 was also assessed as a minor improvement in relation to landscape and visual impacts, compared to the reference case. Route Alignment 6 would be predicted to cause visual effects upon Chawston due to the necessary crossing of the A1 by viaduct. This viaduct would not be required for the preferred Alignment 1 (Tempsford variant), as the alignment crosses the A1 south of the Black Cat roundabout. Route Alignment 6 also results in very high visual impact upon Crows End, to the South of Cambourne. Alignment 6 is close to fewer listed buildings and Scheduled Monuments than the Reference Alignment, however it would pass through the complex heritage resource area of the Bourn Valley. The alignment passes within 500m of seven conservation areas. This includes Bourn - Village & Hall, Caldecote, Harlton, Kingston, Toft, Abbotsley and Bedford. This alignment also has fewer landscape impacts compared to the Reference Alignment. Alignment 6 would avoid impacts on the character of Brickhill Country Park, the River Great Ouse valley and Roxton Park. However, this alignment would be likely to result in very high visual impacts on residential properties in Chawston and Crowns End. EWR Co considers it important in relation to construction impacts that urban and rural communities don't experience unnecessary disruption. At this stage, construction impacts are not considered to differentiate between route

alignments, but in the next stage of assessment and design EWR Co will be considering a range of aspects including sound, noise and vibration, night-time lighting effects, air quality, as well as Public Rights of Way (PRoW) and land and property requirements. A Code of Construction Practice (CoCP) or an equivalent document will be prepared, which will explain steps to eliminate, minimise or mitigate disruption to local people, communities and the environment during construction. Compliance with the CoCP will be secured in the Development Consent Order (DCO). We will explain our approach to construction and operation of the railway and provide further details of potential effects of this during our statutory consultation. As the scheme develops, opportunities will be sought to avoid and reduce potential noise and light pollution through the design of the preferred route Alignment 1 (Tempsford variant). We will prepare an Environmental Statement to describe and assess the likely environmental effects of the proposals and this process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts. A Preliminary Environment Information Report will describe the likely adverse and beneficial environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts and likely beneficial effects. The PEIR will include information regarding baseline soils environment, including presence of best and most versatile (BMV) land, and existing agricultural and forestry land use and agricultural land holdings. The potential impacts and likely effects on the baseline soils environment arising from disturbance and displacement and mitigation such as outline plans for soil management during construction will be presented as part of the PEIR and will be presented at statutory consultation. Potential impacts and likely effects on agricultural and forestry land use and agricultural land holdings arising from land-take, demolitions of key agricultural infrastructure, severance and changes in accessibility will be presented as part of the PEIR and will be presented at

A considerable number of respondents expressed concern about the impact of this section of the route on homes and property values. Many respondents expressed concern about the demolition of homes, most stating that any demolition of homes would be unacceptable. Many other respondents also expressed concern that the value of their property would diminish as a result of the line. Several respondents also remarked that any route alignment chosen would travel relatively close to historic listed buildings, and insufficient consideration had been given to the potential effect of this section on these specific properties. Similarly, several respondents believe that the proposals do not take into account planned development at Bourn Airfield.

statutory consultation. The full environmental statement will then be submitted as part of the development consent order application.

Destruction of historically important landscape: specifically, regarding landscape, Route Alignment 6 would have fewer landscape impacts than the Reference Case (Route Alignment 8). This is due to avoiding impacts on landscape designations at Brickhill Country Park, the River Great Ouse valley and indirect impacts upon the character of Roxton Park. Alignment 1, an emerging preferred option at NSC, and the preferred Alignment 1 (Tempsford variant), are significantly further from Abbotsley, and nearby plantations. EWR Co can't find any references to the medieval village of Letcot within the area of the EWR route. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

The design aims to reduce and mitigate the impacts on the developments at Bourn Airfield and Highfields Caldecote. Route Alignments 1 and 9 would only impact the northeastern corner of the proposed Bourn Airfield development and it is considered most of the development could be delivered unimpeded. Lines on demolition and property value EWR Co, working within constraints such as Sites of Special Scientific Interest, listed buildings etc has sought to design the location of the alignments to minimise the need for properties to be demolished where possible. Where land is acquired or proposed to be acquired, the Compensation Code sets out the circumstances in which compensation is payable, EWR Co provided a guide to compulsory purchase compensation Guide to Compulsory Acquisition and Compensation. Compensation is also available for properties in proximity to the new railway which may be affected by various physical factors of the operation of the railway once it is in use, this is referred to as Part 1 compensation for which we included a guide on the website – Guide to Part 1 claims EWR Co consulted on a Proposed Need to Sell Property scheme at the same time as the 2021 consultation and has introduced the Proposed Need to Sell Property Scheme which aims to assist eligible property owners who have a compelling need to sell while the EWR project is in development and delivery, but who have been

unable to do so other than at a substantially reduced value because of the EWR project. The Proposed Need to Sell Property Scheme is separate to the statutory blight notice process and (as the trigger for statutory blight is the submission of a DCO application) it provides early support for eligible property owners who can satisfy the criteria of the Proposed Need to Sell Property Scheme. Details for the Guide to the Proposed Need to Sell Property Scheme are available here: The Guide to the Proposed Need to Sell Property Scheme.

Noise and vibration: EWR Co has taken into account the potential noise impacts during both construction and operation when assessing the proposed Route Alignments as detailed in Appendix E of the NSC Technical Report (assessment factor 14.13). While all route alignment options are expected to cause some adverse noise impacts on communities, Route Alignments 1, 2 and 6 each represent a minor improvement to the Reference Case (Route Alignment 8) regarding noise impacts, due to smaller number of dwellings potentially affected. However, overall, this was not a differentiating factor. Route Alignment 1, one of the emerging preferred alignments at NSC, also passes within 500m of the fewest number of residential properties and within 1km of the fewest number of heritage assets. Comprehensive assessments will be carried out and will use industry-leading computer modelling, which can incorporate information on local geology to simulate potential noise and vibration impacts along the whole route, including residential and historic buildings in Cambridge, as part of the assessments on any mitigations required. EWR Co will develop a Preliminary Environment Information Report (PEIR) and Environmental Statement to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. During construction, work will be undertaken within the constraints of the Code of Construction Practice (CoCP) or an equivalent document, which will be agreed with the Planning Inspectorate. The CoCP or equivalent document will set out measures to help control constructionA considerable number of respondents expressed concern about the location of the stations along Alignment 1. Many respondents stated that there should not be a station at Cambourne North, which they feel could contribute to growing urbanisation in Cambourne, expanding the town north towards Knapwell and possibly cutting off or enveloping this village. Furthermore, many respondents stated that it is convoluted to travel so far north (or even to Cambourne at all) if EWR Co is intending to have a southern approach into Cambridge. Several respondents opposed any station in Cambourne, as they oppose the southern approach altogether. Several respondents expressed concern about a new station at St Neots for similar reasons. Some are concerned about growing urbanisation in St Neots affecting surrounding villages, which could be accelerated by a new station. Furthermore, a small number of respondents would prefer a station at Tempsford, which is further south and does not already have a station. Some respondents commented on the impact of a Cambourne North station on local communities, stating that this will cut the community of Cambourne off from a number of critical services in the neighbouring village of Comberton.

related impacts including noise and vibration, such as the use of quieter or lower vibration construction methods and equipment.

Construction safety, security and pipelines: EWR Co has and will continue to consult utilities operators, local authorities and landowners throughout the design and development process to understand what infrastructure may exist within the vicinity of the Project. Once ready to enter construction, utility works will comply with the appropriate regulatory and statutory clearances and distances, with works carried out in accordance with health, safety, and construction legislation, as well as relevant technical standards and guidance.

Stimulating economic growth, housing and employment across the Oxford to Cambridge area is a key Project Objective, as explained within Appendix A of the non-statutory consultation Technical Report. Therefore, understanding how station location options might influence the development potential of their surrounding areas has been taken into account when comparing the route alignment options. This has included the potential for development in areas to the north of Cambourne.

Cambourne Station location: EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery estimates for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2. Although EWR Co is still developing its analysis of each station option's potential for housing development, the evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South and so is more likely to be realised. Housing development at Cambourne North is expected to be able to retain separation from and between existing settlements such as Papworth Everard, Knapwell and Elsworth. EWR Co is not promoting housing development and any future development brought forward would need to take account of considerations such as SSSIs and the proximity to existing settlements and addressed through their respective planning processes. The use of an

alignment via Cambourne and an access to Cambridge via the South was considered in selecting a preferred route option in 2020. In the 2021 consultation the appropriateness of this arrangement has been the subject of a question to consultees. EWR Co has taken into account the accessibility of all potential station locations. Both proposed station options in Cambourne would be located close to existing communities. The Cambourne North station proposed as part of Route Alignment 1 would be separated from Cambourne by the A428, which may slightly reduce connectivity to the existing settlement compared to Cambourne South, particularly for active travel options such as walking, wheeling and cycling. However, it is believed that this could be mitigated by a foot and cycle bridge over the A428. The development of first mile/last mile strategies will also be considered for the preferred alignment to mitigate such matters. This was therefore not considered to be a differentiating factor. Station designs for Cambourne North will include provision for public transport interchange and active travel facilities and routes to maintain connectivity with neighbouring villages and communities. Since consultation we have amended the design to run in cutting beneath the B1046 Comberton Road, between Comberton and Toft. This means with a minor realignment of the road a direct connection can be maintained between the two towns.

St Neots/Tempsford Station location: with regard to St Neots station options and future development around the station, EWR Co has considered the potential coalescence within the existing St Neots area. This is also considered to be a risk at Tempsford (i.e. with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk as St Neots as the Tempsford location is further away from the existing settlements. EWR Co is working closely with other projects in the area including the A428 to manage interfaces and explore opportunities between these projects. If the preferred alignment had connected with St Neots EWR Co would have considered, alongside local councils and Network Rail, how to provide the best way of connecting a St Neots EWR station with the existing St Neots communities. The objective would be to minimise impact on St Neots and surrounding villages while

A considerable number of respondents expressed concern about the potential negative impact of Alignment 2 on roads and paths in the area. Several of these respondents stated that this alignment could conflict with the planned upgrade to the A428, preventing required upgrades to the capacity of the road. A small number described the effect on these roads as creating a "rat run" of speeding cars cutting through villages looking for shortcuts. A few others mentioned that roads around Cambourne could be particularly affected, such as the School Lane exit, and the A1198. Several respondents also expressed concern about the possible negative impact of this route alignment option on general connectivity in the area, as well as access to recreational paths.

facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Impact on local traffic EWR Co has considered the impact of the Project on existing highways, PRoW and private access roads as part of the design and assessment of route alignment options, including around Cambourne and St Neots. EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities.

Traffic and transport: the 'Traffic and Transport' environmental assessment of the route alignments was not undertaken prior to non-statutory consultation. As explained in Appendix E of the NSC Technical Report, information related to vehicle movements, non-motorised user movement and movement along waterways and canals were not available at that time. When the final route alignment has been chosen, EWR Co will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. Outcomes of the Transport Assessment will be reported in the PEIR published at the statutory consultation and further developed and refined for the Environmental Statement submitted as part of the DCO application. EWR will prepare a Traffic Management Plan (TMP) following consultation with the relevant highway authority or other bodies. The TMP would include measures aimed at maintaining safety for road users and reducing the impacts of construction traffic, such as setting out the timing of traffic management

measures. With regard to impacts to the highway network during construction, EWR Co will develop a comprehensive logistics strategy that must be adopted by all contractors and suppliers. This will enable EWR Co to plan the way in which people, materials and equipment are moved to and from the various worksites along the route of the proposed railway, working with local authorities and other developers to make sure that EWR Co's use of the local highway network is managed and to ensure that construction traffic is restricted to those routes which have the capacity to safely accommodate the additional traffic. As a result, this is not a consideration that differentiates between route alignments. EWR Co will develop a PEIR to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR which will form elements to be considered at the statutory consultation will include information regarding the baseline for transport, access and non-motorised users, together with a preliminary assessment of impacts. This will be developed and refined for the Environmental Statement that is submitted as part of the DCO application. During the preparation of this assessment, mitigation requirements may be identified and incorporated into the proposals, either as mitigation that is embedded within the design and secured by the Design Approaches, or as mitigation within the Code of Construction Practice (CoCP) or an equivalent document. EWR Co has taken into consideration a number of factors when assessing the different station location options, as discussed in the evaluation of Assessment Factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. Further information on the impact of the Project on specific locations such as the Broadway, the B1046, the A428 to Loves Farm, Shrubbery Lane, Chequers Hill, Colesden Road and Bell Farm Yard will be detailed in the PEIR and during the statutory consultation.

Severance and mental health impacts: at this stage EWR Co is primarily focused on trying to avoid and reduce impacts, by making decisions that help EWR Co 'design out' the potential for environmental impacts. In terms of dividing/splitting communities, all route alignments would create some level of severance between communities and services, although measures would be identified to mitigate such severance at later design stages. The potential impacts on the communities in and around Route Alignment 2 are reported as part of the 'Community' Assessment Factor (page 3 of the NSC Technical Report, Appendix E), with Route Alignment 2 being judged as 'neutral' when compared to the Reference Case (Route Alignment 8). EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoW and private access roads at the statutory consultation.

PROW and access: as mentioned in section 4.2.2 of the Consultation Technical Report, EWR Co has considered the impact of the Project on existing highways, PRoW and private access roads as part of the design and assessment of route alignment options for the new railway between Bedford and Cambridge. EWR Co is seeking to maintain existing highway connections wherever feasible as mentioned in section 4.2.2 of the Consultation Technical Report. Where it is not feasible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. The impact on PRoW was considered within the Community and for Severance environmental considerations within Assessment Factor 14 – Environmental impacts and opportunities. In both cases all alignments were considered to be neutral as the assumption is that the PRoW will not be permanently closed and instead will be diverted. Impacts on highways, access roads and PRoWs are therefore not considered a differentiator between alignments. One of EWR's core

priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. Further information on impacts on PRoW and access will be available at the statutory consultation.

Development and growth opportunities: one of the key objectives of East West Rail (EWR) is to enable sustainable housing and economic growth. The proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, as well as helping to ease some of the upwards pressure on the housing market. The National Infrastructure Commission estimated that creating transport links like the connections created by East West Rail and supporting the area between the world class education hubs of Oxford and Cambridge would generate an additional £85bn in Gross Value Added to the British economy by 2050. The local economy would benefit because growth for towns and cities outside of London would be generated and it would be more appealing for people wanting to start and grow businesses – attracting and retaining the best talent in the region, while encouraging new investment to support the economy. In terms of constraining development opportunities within St. Neots, EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g. you can travel between businesses guicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. Furthermore, businesses would be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. EWR Co has

been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities, though existing or proposed projects will be considered in EWR assessments. While the location of EWR stations might facilitate future development, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development. Any future projects and development facilitated by EWR would also be required to undertake their own impact assessments. Should Alignment 2 have been chosen as the preferred alignment EWR Co would consider, alongside local councils and network operators, how to provide the best method of connecting a St Neots EWR station with the current communities. The objective will be to minimise impact on St Neots and surrounding villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. As detailed in the Consultation Technical Report Appendix E – Project Section D Assessment Factor Tables (East West Rail, 2021) Alignment 2 assessed as neutral compared to the Reference Case (Alignment 8) for the Housing and growth Assessment Factor. A428 upgrade and interaction with National Highways A428 borrow pit location EWR Co are working closely with other projects in the area including the A428 Black Cat to Caxton Gibbet Road Improvement Scheme to manage interfaces and explore opportunities between these projects. As part of these works, we have shared designs and worked collaboratively to minimise the risk of conflicts between the two schemes. It would be expected that National Highways would be required to undertake an appropriate scheme of restoration for the A428 borrow pit. EWR Co are working closely with National Highways to exchange information, manage design and construction interfaces and explore opportunities between these projects. The existence and details

of this borrow pit alongside the expected geology on the route have been accounted for in EWR's design development and construction planning. The geology has been considered within a number of assessment factors including Infrastructure reliability Supporting Considerations within Assessment Factor 11- Performance where Alignment 2 was considered a Minor improvement as it avoided the area of exposed Ampthill clay. The Ampthill clay is a bigger risk and subsequently was the determining factor in the score. Pipelines It is inevitable that in constructing a project of this type, existing underground and overhead services (such as electricity, gas, water and communications) will need to be relocated and / or protected. This work is usually, but not always, undertaken in advance of the main construction works. EWR Co will engage with utility companies with the aim of minimising any disruption that may be associated with utility works. This will cover both existing utility supplies to local communities and extension of services to contractor worksites. Any necessary interruptions to services will involve liaison with relevant parties in advance to discuss appropriate mitigation. Designs for any utility diversions that may be required to deliver the Project will be discussed and agreed with the relevant utility companies and where appropriate will be set out at the statutory consultation. EWR Co has taken into account all capital costs as part of Assessment Factor 3, including costs associated with pipeline crossings. To assess the environmental impacts of the construction and operation of the Project, including works around utilities and groundwater, an Environmental Impact Assessment will be carried out. This will be included in the Environmental Statement (ES) that accompanies the consent application. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. During the preparation of this assessment, mitigation requirements may be identified and incorporated into the proposals, either as mitigation that is embedded within the design and secured by the Design Approaches, or as mitigation within the Code of Construction Practice (CoCP) or an equivalent document. The PEIR will be presented at the statutory consultation. Regarding concerns about the impact to floodplains around pipelines EWR Co will be undertaking detailed flood risk assessments to help inform the design process, especially where the

A considerable number of respondents expressed concern about value for money for Alignment 8, stating that it is too expensive, unnecessary, or both. In particular, many respondents claimed that the technical challenges of this route would make it unreasonably costly. These technical challenges include building cuttings and viaducts, as well as the alignment's length and the terrain it traverses. Respondents said that Tempsford is too small to warrant a station, and that too few of the local residents regularly utilise rail services for this route to be of use.

route crosses major floodplains and has the potential to impact on flood risk elsewhere. These assessments will consider flood risk over the lifetime of the scheme, including accounting and planning for the effects of climate change, and be informed by hydrological and hydraulic modelling where necessary. In terms of the operational resilience of EWR, Alignment 2 is an improvement compared to the Reference Case (Alignment 8) because of the reduced length of the alignment within a floodplain and its avoidance of an area of exposed Ampthill Clay. In relation to flooding and water resources, when compared against the reference Alignment (Alignment 8) Alignment 2 scores the same as Alignments 3, 4, 6, 7 and 9 but does not perform as well as Alignment 5 or Alignment 1, which was an emerging preference at NSC.

Please also refer to the previous row 'complexity of construction'. Cost and value for money EWR is addressing a fundamental lack of connectivity in the region and is part of the government agenda to create a range of opportunities for people right across the area and help spread prosperity across the UK. Section D of the route is considered crucial in achieving this. EWR Co expects the new rail link to support significant local economic growth that will benefit individuals, communities, educational and research establishments, and businesses. While EWR and the location of new stations may help facilitate future development, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses. The case for EWR is set out in more detail in Chapter 2 of the NSC Technical Report. As acknowledged in paragraph 2.2.4 of the NSC Technical Report, the outbreak of Covid-19 significantly cut demand for rail travel in the short-term. Latest statistics released by the Department for Transport (DfT) show that national rail usage is currently around 80% of precovid levels (https://www.gov.uk/government/statistics/transport-use-duringthe-coronavirus-covid-19-pandemic). EWR Co is committed to making sure that communities have the right information they need to help them make informed decisions about our proposals, with a level of detail appropriate to each stage of the Project's development. Estimated costs of route options were published within the 2019 and 2021 consultation documents. Table 9.4 in the non-statutory consultation Technical Report shows the relative

performance of the five shortlisted route alignment options in relation to the Assessment Factors, including Capital costs (assessment factor 3). Further information about this assessment factor can be found in Appendix E of the NSC Technical Report. As route development work progresses cost estimates will continue to be refined and further detail will be published at the statutory consultation. As a key part of the governance process in order to gain funding and approval to proceed with the Project, we are required to demonstrate a viable business case that includes a value-for-money metric, the Benefits / Cost Ratio (BCR). The Project will go through the full financial and business case rigour of the HM Treasury's Green Book. This is used to appraise projects and programmes in a consistent, but holistic manner. This includes scope, cost, social and environmental impact, as well as value for money for the taxpayer. Further information on costs, including the cost of new stations at Cambourne South and Tempsford will be detailed at the statutory consultation.

Design specific costs: as set out in Paragraph 9.7.22 of the NSC Technical Report, Route Alignment 8 would likely have the highest cost and the longest length of structures such as bridges and viaducts. This, among other reasons, means it has not been chosen as one of the NSC emerging preferred route alignments or preferred route alignment. Compared to the alignments that follow the A428 and have a North Cambourne station (Route Alignments 1 and 9, the emerging preferred options at NSC), Route Alignment 8 would cross weaker areas of geology. However, there is not enough information at this stage about the geology that would be encountered along all routes for this to be a determining factor in differentiating between the route alignments in terms of cost risk (assessment factor 3). The design for Alignment 8 presented at NSC did not include any tunnels on the route. EWR Co continues to explore the use of tunnels for the scheme during the design process, but only considers them to be a practical option in specific areas where they can provide a potential solution for addressing constraints (such as crossing roads, public access, environmentally sensitive areas). This is partly because they are more complex and expensive to build, operate and maintain than above ground structure. Tunnels also require additional land for ventilation and exit

provisions in case of emergency as well as pumping and drainage system to deal with groundwater flows.

Potential future costs – operation, and operational costs (assessment factor 4) are considered neutral at this stage of design. This was calculated using track length, and while Alignment 8 represents the shortest track length (37.9km) this was not considered a significant differentiator. Other factors in the operational costs will be calculated at the next stage of design, and further detail presented at Statutory Consultation. EWR Co will need to ensure the railway aligns with relevant policy and legislation for a net zero carbon UK by 2050. Justification for Stations One of the key objectives of East West Rail (EWR) is to enable sustainable housing and economic growth. The proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, as well as helping to ease some of the upwards pressure on the housing market. The majority of land within St Neots already contains housing and businesses and much of the land neighbouring the eastern side of the town is either already committed or allocated for future development. Therefore, our ability to support housing growth would be more effectively realised by constructing a new station between St Neots and Sandy rather than using the current station or relocating this further south as suggested. A new station at Tempsford (or St Neots) would also provide a connection with the ECML, which would be expected to enable housing growth in the area. EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. The NSC emerging preferred options Route Alignments 1 and 9, preferred alignment Route Alignment 1 (Tempsford variant), would include a Cambourne North station.

A considerable number of respondents expressed concern over negative impacts of Alignment 6 on the rural nature of the villages. These respondents also remarked on the impact of this proposal on agriculture in the area, which they claim would be disrupted by construction and the line passing through fields. A few respondents identified specific locations, including Wilden and Bourn, the latter of which many remark will lose its playground.

Disruption to communities: in terms of dividing/splitting communities, all route alignments would create some level of severance between communities and services, although measures are put in place to mitigate such severance at later design stages. In terms of connectivity to Cambridge and within the wider area, the purpose of East West Rail is to provide new connectivity across the Oxford to Cambridge area, making it cheaper, easier and guicker for people to move around, and the new stations proposed will provide local people with the opportunity to experience that connectivity directly. All of the shortlisted route alignment options affect rural areas to some extent, and were they not to do so they would pass through settlements, with a greater impact on residents. Therefore, EWR Co has sought to strike a balance between impacts on the countryside and settlements. There is no reason to suppose that Route Alignment 2 would have a different effect upon physical or mental human health, resident's safety and security to any other route alignment. Compared to the Reference Alignment, Alignment 6 would be closer to fewer residential properties and therefore there would be lower air quality and noise impacts. EWR Co is considering potential impacts on the community and how to reduce or mitigate disruption to local people, communities and the environment and how to avoid significant adverse impacts on health and quality of life. The company is considering a range of matters including sound, noise and vibration, air quality, as well as potential impacts on public rights of way (PRoWs) and land and property requirements. EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g. you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. Furthermore, businesses will be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. At this stage there is not expected to be any loss of recreational facilities or space (including

playing fields at Bourn) for any of the route alignment options. If, during the next stage of design, potential impacts are realised then in line with the requirements of the Planning Act 2008 EWR Co will seek to replace any open space lost permanently due to the Project. The scheme will therefore be developed in a way that seeks to reduce disruption caused by construction, and EWR Co will endeavour to manage construction activity accordingly to further reduce adverse impacts, such as by choosing suitable construction routes and maintaining access (or providing temporary diversions) where possible. The measures EWR Co will use to reduce impacts of construction traffic will be outlined in a Traffic Management Plan (TMP), prepared in consultation with relevant highway authorities and stakeholders, and the Code of Construction Practice (CoCP) or an equivalent document. The CoCP or equivalent document will set out how EWR Co will monitor, control and manage construction impacts. Property impact Alignment 6 would be likely to result in the need to demolish nine residential properties: seven properties located around Broadway, Bourn, one property in Wilden and one property to the south of Little Barford. This alignment would also be likely to result in amenity or isolation impacts on the very sensitive Disabilities Trust care home on Graze Hill. Alignment 6 would be closer to residential properties in Chawston, but overall there would be fewer properties experiencing adverse air quality impacts from this alignment than with the Reference Alignment. Residual noise impacts would be limited to residential properties in Graze Hill, Lower Grange/Sunderland Hill, Colesden, Spinney Rod, Chawston and Crow End. See Homes and Property Section responses below for further detail.

Costs of the Project: the Project will go through the full financial and business case rigour of the HM Treasury's Green Book. This is used to appraise projects and programmes in a consistent, but holistic manner. This includes scope, cost, social and environmental impact, as well as value for money for the taxpayer. In developing the budget, EWR Co will be utilising a Nobel prize methodology to assist in forecasting the overall project budget to reduce the likelihood of project overspend. In this regard, Route Alignment 1 (an emerging preferred option at NSC) and Route Alignment 6 perform best under the assessment

factors presented at NSC. They are also expected to provide the greatest potential for capital cost saving when value management is carried out compared to the Reference Alignment (Route Alignment 8), with all other route alignment options assessed as neutral. The capital costs calculated for Route Alignments 1 and 6 are expected to be more than 10% lower than the cost of the Reference Alignment (Route Alignment 8). Route Alignment 1 performs best among the route alignments in relation to cost, which favours its selection as an emerging preferred alignment at NSC. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

Negative impact on health, safety, security and wellbeing: environmental impacts – and potential resulting impacts on human health – will be considered throughout the scheme development with the aim of avoiding and then reducing them where possible through the design. The impacts of the final route alignment on the health and wellbeing of local communities will then be assessed in a dedicated chapter of the Preliminary Environmental Information Report (PEIR) published at the statutory consultation, and then subsequently within the Environmental Statement, which will detail the mitigation to be provided where appropriate.

Safety and anti-social behaviour: the safety and security of customers is a top priority for EWR Co and we understand the importance of customers being and feeling safe while travelling and around the stations. EWR stations will be designed and operated to industry standards including secure station accreditation. Providing secure cycle storage is an important element to enabling the provision and commitment to sustainable travel. Multiple solutions creating a safe and secure feeling when using stations are being explored including providing well-lit areas with good visibility, staffing at all

stations, and all EWR trains and new stations being fitted with CCTV. EWR Co continues to consider all consultation responses as the customer proposition is developed for the railway. Active measures to be considered will include the provision of suicide prevention fence in all areas where significant level of risk is identified, the consideration in the station modelling approach of the fit in of banners and information offering support and counsel to people in need or the potential installation of smart camera technology able to detect potential risk behaviours and trigger deterring measures to prevent the fatal incident to take place. In developing the design of the permanent railway and temporary construction works, EWR Co will consider measures to avoid the potential for anti-social behaviour, such as maintaining clear sight lines around hoardings and fencing with no hidden corners in order to avoid, where reasonably practicable.

Pollution: EWR Co takes its commitment to delivering sustainable transport seriously and is developing the scheme in line with the policy and law of the Government, such as the Clean Air Strategy. The Project team will work with local authorities to understand the current situation in communities and how to consider relevant Air Quality Management Areas. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include information regarding the baseline air quality environment and identification of the relevant air quality standards and targets. The likely risks from construction activities and potential impacts from operation, including identification of mitigation and control measures will also be presented as part of the PEIR which will form elements to be considered at the statutory consultation. A full environmental statement will then be submitted as part of the development consent order application and will assess changes in nitrogen oxides (NOx), fine particulates (known as PM2.5 and PM10) and dust. This assessment will follow best practice and guidance such as the guidance set by the Institute of

Air Quality Management and other recognised bodies. The team will seek to reduce the impact the new railway may have on air quality. This will include considering what vehicles and equipment will be used during the construction and operation of the railway, as well as how to manage work sites to avoid and reduce any dust creation. In 2018, the Government challenged the rail industry to produce a vision for the removal of all diesel-only trains from the network by 2040 and EWR Co is committed to running a sustainable railway in the long term, with reduced emissions, including for carbon, NOx and particulates. Therefore, the company is exploring how EWR Co can introduce new and emerging technologies in the long-term train fleet. For information about the noise pollution and vibration, see the response from the Noise and Vibration section of this document.

Impact on farmland: in terms of agricultural impact, Route Alignment 6 is likely to impact approximately 40 farm holdings, of which two would be likely to experience a major adverse impact from the construction of the scheme. Based on the length of Route Alignment 6, it would require a broadly similar amount of agricultural land to the Reference Case. Nevertheless, Route Alignment 6 is considered to be a minor improvement overall. Route Alignment 1, an emerging preferred option at NSC, is likely to impact approximately 35 farm holdings, which is fewer than Route Alignment 6, and of which one holding would be likely to experience a major adverse impact. The Preliminary Environment Information Report (PEIR) will include information regarding baseline soils environment, including presence of best and most versatile (BMV) land, and existing agricultural and forestry land use and agricultural land holdings. Potential impacts and likely effects on agricultural and forestry land use and agricultural land holdings arising from land-take, demolitions of key agricultural infrastructure, severance and changes in accessibility will be presented as part of the PEIR and will be presented at the statutory consultation.

Route alignment disruptive: this consideration has included identifying beneficial station locations with regard to existing settlements and potential

future development near Cambourne and the East Coast Main Line. We have also had regard to transport user benefits for existing residents and businesses under the Transport User Benefits assessment factor. In this regard, Route Alignments 6 and 8 performed best because they both represent a relatively straight route from Bedford to Cambridge. In this regard, Route Alignment 6 represents a minor improvement in comparison to Route Alignment 8, the reference alignment. That said, this performance is not sufficient to result in Route Alignment 6 being preferred. EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. EWR Co will consider options for connecting the stations to existing settlements, transport networks and sustainable transport modes as part of our preparation for the statutory consultation. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

Station location, accessibility, and development: stimulating economic growth, housing and employment across the Oxford to Cambridge area is a key Project objective. EWR Co has taken into account the impact to local communities of all sizes, including smaller villages and towns. All of the settlements identified have been considered by EWR Co, as well as any representations in respect of them. In developing our proposals, EWR Co has aimed to minimise the

A considerable number of respondents express concern over the potential negative impact of Alignment 2 on their local communities. Key areas of concern include Colesden and Wilden. Several respondents are concerned about demolition of houses in their communities. Several others are concerned that the route would contribute to the growth of places like Cambourne, which could then grow to subsume other villages along the route. These respondents fear that this would change take away from the small, rural character of the local areas.

negative impact this may have on communities and in particular people's homes, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. In relation to the accessibility of station locations, one of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. EWR Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development.

Disruption to farmland: EWR Co has aimed to minimise negative impacts on communities, people's homes and farmland. However, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts that cannot be avoided and will work closely with people who could be affected. Alignment 2 would be likely to impact approximately 40 farm holdings, of which two would be likely to experience a major impact from the construction of the Project. EWR Co has taken disruption to farmland into account as part of the 'Agriculture, Forestry and Soils' Assessment Factor (14.1), as set out in Appendix E of the NSC Technical Report. Route Alignment 2 was assessed to represent a minor improvement when compared to the Reference Case (Route Alignment 8). Further information on details on the impact on farmland will be made available at the statutory consultation. Disruption to

residents/villages/businesses Impacts on communities will occur to some extent for all route alignments, although in practice EWR Co aim to minimise these so far as possible. EWR Co has taken into account these impacts in the environmental appraisal detailed in Appendix E of the NSC Technical Report (Assessment Factor 14.4). In this regard, Route Alignment 2 is neutral to the Reference Case (Route Alignment 8). Route Alignment 2 would require the demolition of nine properties, seven of which are located at Bourn. The remaining two properties requiring demolition would be an isolated property near Eynesbury Hardwick. and a property in Wilden. The emerging preferred option Route Alignment 1 would result in the demolition of four properties and is therefore an improvement on both the Reference Case (which would result in the demolition of eight properties) and Route Alignment 2. EWR will provide increased connectivity to households and businesses across the route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. However, as set out in the Technical Report Appendices, there is insufficient detail at this stage of the design to complete Assessment Factors for the impact on local businesses in operation and the impact on local businesses from construction. Further details on disruption to residents, villages and businesses will be available at the statutory consultation.

Residents' wellbeing: EWR Co shall be a good neighbour to the communities in which we and our partners operate by effectively managing and controlling noise, vibration and pollutant emissions to air to avoid significant adverse impacts on health and quality of life. In terms of residents' health, wellbeing and quality of life, Appendix E of the NSC Technical Report (page 4) confirms that insufficient detail existed for an assessment of the impact of each of the route alignments on Health to be undertaken. However, EWR Co will report on this matter at the statutory consultation stage, in advance of the DCO application including a Health Impact Assessment of the scheme being put forward. During construction, EWR will ensure that health, safety, and wellbeing performance meets and exceeds minimum legal requirements and

industry best practise. The Code of Construction Practice (CoCP) or equivalent document sets out additional standards to maintain safety and security.

Freight on the trainline: passenger services are at the heart of this Project. The key objective given to EWR Co by the Department for Transport (DfT) is to improve east-west public transport connectivity by providing rail links in the Oxford to Cambridge area. While EWR Co is planning a passenger route, it has been asked by the Government to accommodate existing freight services that are already running through places such as Oxford, Bicester, the Marston Vale Line and Bedford and to make provision for potential future freight demand. The impact on operational carbon emissions has not been assessed at this stage but will form part of the next stage of assessment. As all of the route alignments are designed to the same tolerances, use by freight services is not a differentiator. Further information of the volume of freight will be made available at the statutory consultation.

Railway proximity to villages: in developing its proposals, EWR Co has aimed to minimise the negative impact the Project may have on communities and in particular people's homes. However, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. Both Alignment 2 and the emerging preference Alignment 1 are considered as having a minor improvement on the reference case for number of communities impacted. Alignment 2 without any mitigations has the potential to negatively impact Clapham East, Clapham Park Wood, Woodlands Park, Graze Hill, Ravensden North-west, Lower Grange/Sunderland Hill, Wilden, Cheques Hill North, Wilden East, Duck's Cross, South Brook, Colesden, Spinney Road, Chawston, Chawston East, Wintringham, Wintringham Hall, Caxton, Lower Cambourne, Great Cambourne, Crow End, Caldecote, Kingston, and Little Eversden. In comparison, the Reference Case has the potential to negatively impact Clapham East, Clapham Park Wood, Woodlands Park, Mowsbury, Ravensden North-west, Ravensden South, Ravensden Church End, Woodend Lane,

Bedford Road, Roxton, Abbotsley, Caxton, Lower Cambourne, Great Cambourne, Crow End, Caldecote, Kingston, and Little Eversden. The emerging preference Alignment 1 has the potential to negatively impact Clapham East, Bedford East, Clapham Park Wood, Woodlands Park, Graze Hill, Ravensden North-west, Lower Grange/Sunderland Hill, Wilden, Chequers Hill North, Wilden East, Duck's Cross, South Brook, Colesden, Spinney Road, Chawston, Chawston East, Wintringham, Wintringham Hall, Cambourne North, Upper Cambourne, Highfields, Highfields Court, and Little Eversden.

Impact to wildlife and amenities: EWR Co recognises the importance of biodiversity and protecting the habitats of local wildlife including priority habitats such as woodland and ancient woodland as well as parks and greenspaces. As part of EWR Co's commitment to changing the environment for the better, the company is thinking carefully about protected species and their habitats when designing the railway. EWR Co is taking account of the RSSB's "Rail Sustainable Development Principles" in it's the design, construction and operation of the Project. EWR Co is aiming to mitigate direct impacts on the most significant nationally and internationally designated environmental assets including, National Nature Reserves (NNRs), Ramsar Sites, Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs) and candidate Special Areas of Conservation (cSACs), Special Protection Areas (SPAs) and candidate Special Protection Areas (cSPAs), Ancient Woodland and Veteran Trees. For Ecology and Biodiversity Alignment 2 represents a major improvement to the Reference Case (Route Alignment 8) as it involves no overlap with SSSI IRZs, no indirect impact to ancient (or potentially ancient) woodland sites, and slightly lower impacts to mapped priority habitat areas. Minor impacts are likely to the boundary of the Cambourne Nature Reserve (but these can be mitigated and compensated locally). EWR Co is mapping where the new railway may cross and border habitats used by other important protected species, such as badgers, great crested newts and bird species, in order to consider how best to avoid impacting them altogether or to mitigate impacts upon them. A programme of habitat surveys and species-specific surveys is designed to help understand

where species and habitats are in the landscape and how they are used, enabling the Project to avoid, reduce, mitigate and if necessary, compensate for identified impacts throughout the design of the railway. For example, EWR Co will consider where to enhance or create wildlife corridors and green infrastructure where appropriate. Route Alignment 2 would be likely to result in amenity or isolation impacts on the very sensitive Disabilities Trust care home on Graze Hill. This alignment would be closer to residential properties in Chawston, but overall fewer properties would experience adverse air quality impacts from this alignment than with the Reference Alignment. Residual noise impacts would be limited to residential properties in Graze Hill, Lower Grange / Sunderland Hill, Colesden, Spinney Road, Chawston, Wintringham Hall and Crow End.

Security and safety concerns: in terms of safety and security (in the context of potential increased anti-social behaviour), EWR Co is committed to developing, designing and constructing the railway so that such security and safety risks are as low as possible. The Sponsor's Requirements contains the principles that the Project will comply with this in this respect (e.g. aligning with the DfT's 'Security in the Design of Stations (SIDOS) best practice design guidance. The Project shall be designed and operated cognisant of best practice in physical, personnel and cyber security management and in compliance with DfT's security regulations. EWR Co will consult with the DfT, British Transport Police and other HMG security partners to achieve this outcome. Further details will be available at the statutory consultation.

Noise/Light/Air/Visual pollution: Assessment Factor 14.11 (Landscape and visual) includes an assessment of the visual impacts of each route alignment, and an assessment of the impact upon landscape character. This assessment took into account the impact of structures including embankments and viaducts, and in addition to settlements, was also undertaken on country parks (e.g. Brickhill Country Park) and 'other park land' (e.g. All Angels Park). Route Alignment 2 has far greater visual impact than the reference case, forming very high visual impacts upon Chawston due to the A1 viaduct. It also a causes

moderate impacts at Caxton, Caldecote, Great Cambourne, Lower Cambourne and Kingston due to the South of Cambourne alignment and forms additional visual impact upon Eltisley. Alignment 2 has notably fewer landscape impacts in comparison to the reference case due to not impacting on any landscape designations and on only a few woodlands. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design, particularly between Cambourne and Chapel Hill. This includes minimising the amount the railway alignment is raised while allowing for road and other accesses to cross over or under the railway. When considering these opportunities, we aim to balance the overall impact of our design. In terms of noise and air pollution, EWR Co has taken into account these impacts as part of the environmental appraisal detailed in Appendix E of the NSC Technical Report.

Assessment Factor: for the 'Noise & Vibration' Assessment Factor (14.14), Route Alignment 2 was rated as a minor improvement relative to the Reference Case (Route Alignment 8), due to the slightly smaller number of dwellings potentially affected. Without mitigation, Alignment 2 has the potential to create adverse impacts on a number of communities including Wilden and Colesden. For the 'Air Quality' assessment factor (14.2), it was similarly rated as a minor improvement in relation to air quality compared to the Reference Case for the same reason, and additionally, no AQMAs are also likely to be impacted. The emerging preferred alignment at NSC, Alignment 1, brings the alignment closer to properties in Highfields and Chawston, but overall there are significantly less properties impacted by this alignment. Alignment 1 is considered a major improvement in air quality when compared to the reference case. The Project team will work with local authorities to understand the current situation in communities and how to consider relevant Air Quality Management Areas. As the scheme develops, the Project will assess changes in NOx, PM2.5 and PM10 and present the outcome of this as part of the Preliminary Environmental information Report (PEIR), published during the statutory consultation, and the Environmental Assessment

submitted as part of the Development Consent Order (DCO). This assessment will follow best practice and guidance set by the Institute of Air Quality Management. The team will seek to reduce the impact the new railway will have on air quality. This will include considering what vehicles and equipment will be used during the construction and operation of the railway, as well as how to manage work sites to avoid and reduce any dust creation. The potential effects of light pollution from the railway will be considered as EWR Co develops the designs for the Project. This will include considering the type, location and layout of lighting in construction compounds and work areas, stations, maintenance compounds and new access routes. Through the design EWR Co will seek to avoid impacts on 'sensitive receptors', such as nearby residential areas or ecological habitats.

Community Severance: in terms of dividing/splitting communities, all route alignments would create some level of severance between communities and services, although measures would be put in place to mitigate such severance at later design stages. The potential impacts on the communities in and around Route Alignment 2 are reported as part of the 'Community' Assessment Factor (page 3 of the NSC Technical Report, Appendix E), with Route Alignment 2 being judged as 'neutral' when compared to the Reference Case (Route Alignment 8) and emerging preference Alignment 1. Additionally, EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoW and private access roads at the statutory consultation.

Developments around the station: stimulating economic growth, housing and employment across the Oxford to Cambridge area is a key Project objective. With regard to contribution to enabling housing and economic growth, Route Alignment 2 is assessed as neutral when compared to the Reference Case

(Route Alignment 8). This Assessment Factor was a key consideration in the decision to choose Alignment 1 as an emerging preferred option, as detailed in the Consultation Technical Report Appendix E – Project Section D Assessment Factor Tables (East West Rail, 2021), with Cambourne North representing a better option for growth than Cambourne South. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Alignment 1 (Tempsford variant), also connects to Cambourne North station. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. One of the key objectives of East West Rail (EWR) is to enable sustainable housing and economic growth. The proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, as well as helping to ease some of the upwards pressure on the housing market. EWR Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses not just future development. Existing or proposed projects (i.e. permitted local plan projects) will be considered as part of the EWR assessments. Future projects and developments facilitated by EWR will require their own separate impact assessments. EWR Co has considered the potential for future development and coalescence in relation to both St Neots station (with the existing St Neots area) and Tempsford station (with Tempsford, Everton, Little Barford and Sandy). The potential for coalescence at Tempsford station is not as high as the potential at St Neots, as the Tempsford station is further away

from the existing settlements. Cambourne North was found to provide a more suitable location for economic and housing growth than Cambourne South. This was a differentiating factor in the decision to choose Alignment 1 as an emerging preferred option at NSC. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. EWR Co is working closely with other projects in the area including the A428 to manage interfaces and explore opportunities between projects, and further information will be provided at the statutory consultation. If Route Alignment 2 had been selected as the preferred alignment EWR Co would have considered, alongside local councils and Network Rail, how to provide the best way of connecting a St Neots EWR station with communities. The objective would be to minimise impact on St Neots and surrounding villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options.

Station Accessibility: in relation to the accessibility of station locations, one of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. Further details will be available at the statutory consultation.

A considerable number of respondents expressed concern that the roads and paths in their area would be disrupted by this section of track. Many of these respondents stated that the roads in North Bedfordshire are small, winding and often poorly maintained country roads, making them unsuitable for increased traffic from both construction vehicles and those driving to access the line. Furthermore, many respondents claimed this route would create additional traffic on already congested roads, particularly around St Neots and Cambourne. Many respondents also mentioned that North Bedfordshire has a network of footpaths and bridleways, which they are concerned could become inaccessible or severed by the line. Several respondents expressed concern that the line crossing roads would compound all of these effects by further physically disrupting transport networks. Respondents expressed particular concern for Carriage Drive in Clapham, as well as the A428 and A421.

Congestion/impact on road network; parking: design is still under development, and EWR Co will continue to assess the potential impacts of the Project on the existing road network, including Carriage Drive, the A428 and A421. EWR Co will prepare a Transport Assessment to consider the impact of the scheme on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. EWR Co will also prepare a Traffic Management Plan (TMP) for following consultation with all the relevant highway authority or other bodies. The TMP would include measures aimed at maintaining safety for road users and reducing the impacts of construction traffic, such as setting out the timing of traffic management measures. In choosing and assessing the station location options, EWR Co has taken into account a number of factors, including accessibility and land availability. At the next stage of design, further details around the design of stations including Cambourne will be developed including consideration of parking requirements and active travel (walking, wheeling and cycling), with suitable access roads and paths provided. Car parking provision will be considered. Disruption to PRoW As mentioned in section 4.2.2 of the NSC Technical Report, EWR Co has considered the impact of the Project on existing highways, public rights of way (PRoW) (including footpaths and bridleways) and private access roads as part of the design and assessment of route alignment options, with Route Alignment 1 (an emerging preferred alignment at NSC) expected to cross 69 PRoWs The assumption is that PRoW will not be permanently closed and instead will be diverted so this is not a differentiating factor. EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not possible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which reduces the impact on communities. EWR Co has considered safety and security of the public (including non-motorised users) and workers at all stages of design, and this will continue during construction and into operation and maintenance. The PEIR will include available baseline

A considerable number of respondents expressed concerns about the potential negative impact of Alignment 2 on the environment. Many of these respondents expressed specific concern for the wellbeing of wildlife in the area and mention the habitats at Bourn Brook, Cambourne Reserve and the Conservation Areas along the route. A small number mentioned specific species such as the barbastelle bat and great crested newt. Several respondents also raised concerns about potential negative environmental and visual impacts from earthworks required for the railway cuttings in this alignment. Some respondents remarked on the potential negative impact of this line on woodlands along the route, particularly ancient woodlands, should trees need to be felled. A few expressed concern that the cuttings may be prone to, or create, flooding in the area. Several also commented on the potential for negative impacts on air quality from the use of diesel trains.

data and a preliminary construction and operation assessment of impact on residential properties, community facilities, recreational facilities, open space and PRoW. This will be presented at the statutory consultation with a full environmental statement being submitted as part of the development consent order application.

Cambourne station concerns: in choosing and assessing the station location options, EWR Co has taken into account a number of factors, including accessibility and land availability. At the next stage of design, further details around the design of stations including Cambourne will be developed including consideration of parking requirements and active travel, with suitable access roads and paths provided. The impacts of travel to stations by existing travellers is not a matter that is considered to differentiate between alignments. This is because the proposed station locations, including Cambourne North, are intended to serve future as well as existing residential areas, and travel modes to the new stations are not yet be known. As such, this is not a differentiating factor.

The design is based on proven construction practices that have been carried out successfully on other projects which will include drainage design for cuttings and embankments.

Land drainage: in terms of land drainage and reinstatement, these elements were not considered to be differentiators within the assessment factor process but are currently being taken forward as part of the Project's design development. EWR will work with landowners whose farm water supply reservoirs and associated irrigation system is significantly impacted to ensure that a comparable supply is maintained during construction. Impact to nature reserve and bourn brook valley Alignment 2 would result in fewer losses of mapped priority habitat areas than the Reference Case (Route Alignment 8). This alignment would, however, be likely to result in minor adverse impacts to the boundary of the Cambourne Nature Reserve. In terms of the potential negative impacts on this Nature Reserve, the Ecology and Biodiversity assessment undertaken (details of which are contained on page 4 of the NSC

Technical Report Appendix E) confirmed that the minor impacts likely to the boundary of the reserve would be mitigated and compensated locally. The Bourn Brook Valley is an important linear feature and wildlife corridor and the design would include features (e.g. viaducts and lineside planting) to ensure that its wildlife function is retained. This section of the NSC Technical Report also confirms that Route Alignment 2 represents a major improvement to the Reference Case (Route Alignment 8), due to there being no overlap with SSSI IRZs, no indirect impact to ancient (or potentially ancient) woodland sites, and slightly lower impacts to mapped priority habitat areas. Interaction with the A428 works at Black Cat Junction Alignments 1, 2 and 9 run roughly parallel to the north of the A428 Scheme for approximately 12km. It is considered that alignments running on the northern side of the A428 could have benefits including having fewer additional setting impacts to listed buildings and Scheduled Monuments. As set out in the NSC Technical Report (9.8.6), all options perform better from an environmental perspective than the baseline Reference Alignment – Alignment 8. Alignments 1, 2 and 6, which are located to the north of the A428, perform slightly better than Alignments 8 and 9, which are located south of the A428, in terms of the environment Assessment Factor (14). The design of the scheme at Black Cat Junction was considered as part of the assessment factor process and it was noted in Assessment Factor 14.11 (Landscape and visual) that the Alignment 2 has far greater visual impact than the reference case, forming very high visual impacts upon Chawston due to the A1 viaduct. However, as Alignment 2 has notably less landscape impacts in comparison to the reference case due to not impacting on any landscape designations and on only a few woodlands, overall Alignment 2 was considered as neutral for combined landscape and visual impacts in comparison to the reference case. The designs as shown assumed on a reasonable worst case basis that no integration with the A428 Black Cat improvement scheme would be possible due to the scheme's more advanced stage. However, there may be opportunities, by working with National Highways, to integrate the design and construction of the A428 Black Cat improvement scheme and EWR. EWR Co is working closely with National

Highways to manage interfaces and explore opportunities between the projects.

Interaction with A428 borrow pits: it would be expected that National Highways would be required to undertake an appropriate scheme of restoration for the A428 borrow pit. EWR Co is working closely with National Highways to exchange information, manage design and construction interfaces and explore opportunities between these projects. The existence and details of this borrow pit alongside the expected geology on the route have been accounted for in EWR's design development and construction planning. The geology has been considered within a number of assessment factors including Infrastructure reliability Supporting Considerations within Assessment Factor 11- Performance where Alignment 2 was considered a minor improvement as it avoided the area of exposed Ampthill clay. The Ampthill clay is a bigger risk and subsequently was the determining factor in the score. Groundwater and flooding In terms of risks to the Groundwater SPZ in the vicinity of Cambourne South and the issue of flooding, the Water Resources and Flood assessment undertaken (as documented in Section 4.14 of the NSC Technical Report Appendix E) acknowledged that Route Alignment 2 crosses this SPZ, albeit that the route alignment was judged as a minor improvement compared to the Reference Case (Route Alignment 8) due to the shorter crossing of the River Great Ouse, and its location nearer to the sub catchment divide reducing the flood risk. EWR Co will identify surface water and groundwater features that have the potential to influence or be influenced by the proposed route. When assessing possible impacts from the Project on the water environment, including watercourses, wetlands, aquifers and associated habitats, our assessment will consider effects both upstream catchments and downstream reaches that might be influenced by the route over the lifetime of the scheme, including the potential impacts of pollution generated during construction. EWR Co assessments will consider quantity (under a range of conditions) and quality, as well as aspects such as geomorphology and the wider value that the water environment provides in terms of habitats and biodiversity. Where EWR Co identify potential impacts, EWR Co will apply an avoid-control-mitigate-

manage hierarchy that seeks to avoid impacts through design where possible and then looks to minimise, mitigate, and manage residual impacts where it is not possible to avoid a potential impact. Any identified potential impacts on water dependent habitats shall be considered in close consultation with ecologists and appropriate mitigation to protect these features shall be applied where necessary. All potential impacts on surface or groundwater features and any proposed mitigation will be developed in consultation with relevant regulators, key stakeholders and in accordance with relevant legislation and best-practice guidelines. Construction-related impacts on the environment will be identified and managed, as far as reasonably practicable, by a Code of Construction Practice (CoCP), or an equivalent document, submitted as part of a DCO application. This will include measures to control impacts related to surface and groundwater management.

Farmland: EWR Co has aimed to minimise negative impacts on communities, people's homes and farmland. However, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts that cannot be avoided and will work closely with people who could be affected. Alignment 2 would be likely to impact approximately 40 farm holdings, of which two would be likely to experience a major impact from the construction of the Project. EWR Co has taken disruption to farmland into account as part of the 'Agriculture, Forestry and Soils' Assessment Factor (14.1), as set out in Appendix E of the NSC Technical Report. Route Alignment 2 was assessed to represent a minor improvement when compared to the Reference Case (Route Alignment 8). Further information on details on the impact on farmland will be made available at the statutory consultation.

Station location: EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the

evaluation of Assessment Factor 2 in Appendix E of the NSC technical report. For the second non-statutory consultation, EWR Co undertook high-level assessments of the following factors to understand the potential of each station location for housing and economic growth: • The availability and suitability for development of land within close proximity to potential station locations and any constraints (for instance environmental considerations such as flooding or heritage assets); • Placemaking opportunities and constraints. • Relevant information from local plans and related local planning documents; and • Socio-economic factors. The findings from these high-level assessments were summarised in Technical Report in paragraphs 9.6.21 – 9.6.53, with discussion of the Cambourne South and North station locations found in paragraphs 9.6.21 – 9.6.38. Overall, EWR Co considers alignments serving Cambourne North (including the emerging preferred options Route Alignment 1 and Route Alignment 9 and EWR Co's preferred alignment – Alignment 1 (Tempsford variant)) as being likely to perform better in relation to housing and economic growth than those serving Cambourne South, such as Alignment 2. EWR Co has considered the feedback from the 2021 consultation and concluded that the majority of Alignment 1 provides a better solution than the other routes presented for Section D between Clapham Green and The Eversdens. However, EWR Co has identified a localised variation of this route which incorporates part of Alignment 9 to serve a potential East Coast Mainline station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

Environmental impact: EWR Co recognises the importance of biodiversity and protecting the habitats of local wildlife including priority habitats such as woodland and ancient woodland as well as parks and greenspaces. As part of

EWR Co's commitment to changing the environment for the better, the company is thinking carefully about protected species and their habitats when designing the railway. EWR Co is aiming to mitigate direct impacts on the most significant nationally and internationally designated environmental assets including, National Nature Reserves (NNRs), Ramsar Sites, Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs) and candidate Special Areas of Conservation (cSACs), Special Protection Areas (SPAs) and candidate Special Protection Areas (cSPAs), Ancient Woodland and Veteran Trees. This includes the colony of barbastelle bats in Eversden and Wimpole Woods Special Area of Conservation (SAC), which is located within the route option area and within 3-4km of the emerging route alignments between Bedford and Cambridge. Throughout 2022 EWR Co carried out a number of surveys to better understand the barbastelle population in the area. Further bat surveys will be carried out in 2023. These will be used to ensure that the design does not significantly affect the population of barbastelle bats and EWR Co will develop a PEIR and Environmental Statement to describe the likely environmental effects of the proposals and report the results of survey work. Route options connecting to St Neots (Alignments 1, 2, and 6) were judged as major improvements for the Environmental impacts and opportunities Assessment Factor (14), whereas Alignment 9, via Tempsford, was judged as a minor improvement when compared against the Reference Case (Alignment 8). Route Alignment 2 involves no overlap with Site of Special Scientific Interest – Impact Risk Zones (SSSI IRZs), no direct impact to ancient (or potentially ancient) woodland sites, and slightly lower impacts to mapped priority habitat areas. Minor impacts are likely to the boundary of the Cambourne Nature Reserve (but it is expected that these can be mitigated and compensated locally). Route Alignment 2 represents a minor improvement to the Reference Case (Alignment 8) in respect of the Environmental Assessment Factor. The emerging preferred option Alignment 1 would represent a major improvement against the Reference Case. EWR Co is mapping where the new railway may cross and border habitats used by other important protected species, such as badgers, great crested newts and bird species, in order to consider how best to avoid impacting them altogether or to mitigate impacts

upon them. A programme of habitat surveys and species-specific surveys is designed to help understand where species and habitats are in the landscape and how they are used, enabling the Project to avoid, reduce, mitigate and if necessary, compensate for identified impacts throughout the design of the railway. For example, EWR Co will consider where to enhance or create wildlife corridors and green infrastructure where appropriate. In terms of CO2 emissions and the environmental impact on St Neots, (details of which are contained in Section 4.13 of the NSC Technical Report Appendix E), Route Alignment 2 was measured to result in a decrease in GHG emissions associated with earthworks, compared to the Reference Case. Overall. It results in a lower carbon footprint (approximately 20% saving) and is therefore judged as a major improvement compared to the Reference Case (Route Alignment 8).

Viaducts and cuttings: in regard to construction of cuttings and other infrastructure the design solution and construction planning will consider potential construction and longer-term environmental impacts of the scheme, and EWR Co will seek to include specific measures to reduce the impact of the Project on the surrounding environment during construction and operation. For example, measures to reduce visual intrusion may include the use of landscaping and screening. The viaducts, embankments and cuttings on the route were included within the capital costs (Assessment Factor 3) and climate environmental consideration (14.3). Alignment 2 was considered to be Neutral for Capital Costs and a major improvement for climate 14.3 as it results in a decrease to the bridge and viaduct areas required, compared to the Reference Case and overall, it results in a lower carbon footprint (approximately 20% saving). Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. These include minimising the amount the railway alignment is raised while allowing for road and other accesses to cross over or under the railway. When considering these opportunities, we aim to minimise the overall impact of our design.

Woodland impact (including ancient woodland): EWR Co is following the environmental mitigation hierarchy by seeking to avoid significant adverse effects on woodland and ancient woodland and where this isn't possible, seeking to reduce and mitigate impacts and if necessary, providing compensation where this is feasible. EWR Co is focused on trying to avoid and reduce impact, by making decisions that help 'design out' the potential for environmental impacts. The Project has committed to delivering biodiversity net gain which requires that habitats for wildlife are enhanced and left in a measurably better state than they were pre-development which includes woodland. Both Route Alignment 2 and Route Alignment 1 would result in the loss of three trees (which are TPO, Ancient or Veteran). Neither would impact ancient woodland in both +10m and +50m buffer scenarios. Both Alignment 1 and 2 would result in an area of 87,742m2 of the scheme being within 250m of ancient woodland, which is the lowest score of all alignments. Alignment 2 would not encroach into the Weaveley and Sand Woods SSSI IRZ and would not result in impacts to confirmed and potential ancient woodland sites (where these woodlands are within 50m of the alignment). Our consultation was undertaken at an early stage in the design process and the specific woodland areas of Great woods, Clapham Park and woodland including Bushy Common and Langlands were not specifically assessed in these early plans. At the statutory consultation we will share more information about specific areas and the potential environmental impact. Heritage Alignment 2 is north of and in parallel to the A428 resulting in passing closer to fewer listed buildings and Scheduled Monuments (SM) than the Reference Case, and avoids the heritage sensitive areas at Tempsford and Roxton. This reduces the likelihood of additional setting impacts to listed buildings and SMs in the vicinity as fewer assets would be impacted. However, to the south of Cambourne, Alignment 2 would pass through the complex heritage resource area of the Bourn Valley and, east of Eltisley, comes in close proximity to a Scheduled Monument and associated listed building ("Pastures Farm – Moated site at Pastures Farm" and "Dovecote to the North East of Caxton Pastures Farmhouse") which is likely to result in adverse setting impacts to the designated assets. The alignment passes within 500m of six conservation areas. This includes Bourn – Village &

Hall, Caldecote, Harlton, Kingston, Toft and Bedford. Despite coming closer to this particular SM and coming in close proximity to slightly more SMs overall than the Reference Case, due to the benefits of keeping north via St Neots in the western section this option avoids the heritage sensitive areas at Tempsford and Roxton. Alignment 2 passes within 500m of six conservation areas totaling 464,734m2; considerably less than the Reference Case. This includes: Bourn - Village & Hall, Caldecote, Harlton, Kingston, Toft and Bedford. Alignment 2 represents a minor improvement compared to the Reference Case for Assessment factor 14.10 (Historic Environment). This Assessment factor includes detail on the proximity of designated and nondesignated heritage assets to each of the route alignments, and therefore contains a qualitative assessment of the likelihood of 'setting impacts' to each of these designations. In terms of historical buildings and conservation areas, due to it being located north of and in parallel to the A428, Route Alignment 2 passes closer to fewer listed buildings than the Reference Case (Route Alignment 8) and reduces the likelihood of additional setting impacts to listed buildings and Scheduled Monuments in the vicinity as fewer assets would be impacted. This is reported as part of the Historic Environment assessment (page 5 of the NSC Technical Report Appendix E). At the statutory consultation we will share more information about specific areas and the potential environmental impact. Visual impact, Shading and loss of light Route Alignment 2 has far greater visual impact than the reference case, forming very high visual impacts upon Chawston due to the A1 viaduct. It also a causes moderate impacts at Caxton, Caldecote, Great Cambourne, Lower Cambourne and Kingston due to the South of Cambourne alignment and forms additional visual impact upon Eltisley. However, as Alignment 2 has notably less landscape impacts in comparison to the reference case due to not impacting on any landscape designations and on only a few woodlands, overall Alignment 2 was considered as neutral for combined landscape and visual impacts in comparison to the reference case. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design, particularly between Cambourne and Chapel Hill. This include minimising the

amount the railway alignment is raised while allowing for road and other accesses to cross over or under the railway. When considering these opportunities, we aim to balance the overall impact of our design. EWR Co recognises that light pollution, and potential shading, from both the construction and operation of a railway is an important issue for local communities. Lighting was not specifically considered as part of the Assessment Factors and is not considered to be a differentiator between alignments. However, the potential effects of light pollution, and shading, from the railway will be considered as EWR Co develop the designs for the Project. This will include considering the type, location and layout of lighting in construction compounds and work areas, stations, maintenance compounds and new access routes. Through the design EWR Co will seek to avoid impacts on 'sensitive receptors', such as nearby residential areas or ecological habitats. Further information will be presented on this at the statutory consultation and construction-related impacts on the environment will be identified and managed, as far as reasonably practicable, by a Code of Construction Practice (CoCP) or an equivalent document submitted alongside a Development Consent Order (DCO) application. This will include measures to control impacts related to construction lighting.

Air quality Without mitigation: Alignment 2 has the potential to create adverse impacts on a number of communities including Wilden and Colesden. For the 'Air Quality' assessment factor (14.2), it was similarly rated as a minor improvement in relation to air quality compared to the Reference Case for the same reason, and additionally, no AQMAs are also likely to be impacted. The emerging preferred option at NSC Alignment 1 brings the alignment closer to properties in Highfields and Chawston, but overall there are significantly less properties impacted by this alignment. Alignment 1 is considered a major improvement in air quality when compared to the reference case. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better

A considerable number of respondents expressed general concern about the environment along the route. In particular, many respondents expressed concern that this route will contribute carbon emissions at a time when society is trying to eliminate these. Respondents remarked that these emissions would come both from construction and the trains themselves. Several respondents also suggested that dust and dirt from building earthworks would negatively impact the local environment. Several respondents remarked that much of the area, particularly around the River Ouse and in Clapham, is prone to flooding, which could be made worse. Some respondents expressed concern that woodlands in North Bedfordshire, which contribute to both recreation and biodiversity, could face damage from the line. A considerable number of respondents expressed concern about wildlife and habitats that could be affected by this section. Many remarked that biodiversity in the area is of particular importance to the local community, as well as to stakeholders like Bedfordshire County Council, and that this section could harm efforts to bolster biodiversity. Particular flora and fauna mentioned by respondents included orchids, bats, newts and birds. Many respondents voiced concern that this route could have a negative impact on

achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. The Project team will work with local authorities to understand the current situation in communities and how to consider relevant Air Quality Management Areas. As the scheme develops, the Project will assess changes in NOx, PM2.5 and PM10 as part of the Environmental Assessment submitted alongside the Development Consent Order (DCO). This assessment will follow best practice and guidance set by the Institute of Air Quality Management. The team will seek to reduce the impact the new railway will have on air quality. This will include considering what vehicles and equipment will be used during the construction and operation of the railway, as well as how to manage work sites to avoid and reduce any dust creation.

EWR Co has taken into account a number of environmental factors in the development and assessment of route alignment options, including carbon emissions, flood risk, ecology and biodiversity and air quality.

Carbon emissions: with regard to carbon emissions, Route Alignment 1 (an emerging preferred alignment at NSC) would result in an increase to track length required compared to the Reference Case (Alignment 8). However, it would require fewer bridge and viaduct structures, and a significant decrease in emissions associated with earthworks. Overall, Route Alignment 1 is considered to result in a 32% saving in carbon footprint compared to the Reference Case (Route Alignment 8), and this represents the lowest carbon footprint of all shortlisted route alignment options. The impacts of operational carbon emissions have not been calculated at this stage but will form part of the next stage of assessment and the further information will be presented at the statutory consultation.

Air quality and traction power: EWR Co has considered the potential adverse impacts to air quality as part of the environmental appraisal of route

air quality in the area, particularly that which could be caused by particulates from diesel trains. Several of these respondents claimed that embankments in this section could compound this issue.

alignments (assessment factor 14.2). For the purposes of the air quality appraisal, it has been assumed that the Project will operate using diesel-powered trains to allow the extent of potential air quality impacts to be understood. This assumption does not mean that other methods of propulsion will not be considered as the Project develops. EWR Co is committed to running a sustainable railway in the long term, with an ambition to be a net zero carbon railway. This includes the use of sustainable traction power in the long term. EWR Co is exploring how it can introduce new and emerging technologies, in addition to electrification, into the long-term train fleet and infrastructure.

Embankments: since consultation EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Dust details of construction mitigation measures, including dust suppression, will be included within the Code of Construction Practice (CoCP) or an equivalent document which will form part of the DCO application for the Project. This, along with other construction impacts, will be reduced as far as practicable.

Flood risk: EWR Co has taken into account the potential flood risk of each of the proposed route alignments (assessment factor 14.8). While each route alignment option would include crossing the River Great Ouse floodplain at Clapham, Route Alignment 1 (an emerging preferred alignment at NSC) and EWR Co's preferred alignment Route Alignment 1 (Tempsford variant), would

include a shorter crossing of this area. EWR Co will develop flood risk assessments to help inform the design process, which will consider future requirements of a changing climate. EWR Co will also continue working with the Environment Agency to share information, data and modelling to support this work, in addition to reviewing the condition and capacity of the railway drainage systems with the aim of reducing future risk of the railway flooding.

Ancient woodland and Sites of Special Scientific Interest (SSSIs): the potential impacts to woodland and ancient woodland were considered in the assessment of route alignment options as part of assessment factor 14.5, and all proposed route alignments would avoid direct impacts on ancient woodland. Route Alignment 1 (an emerging preferred alignment at NSC) and Alignment 1 (Tempsford variant), (EWR Co's preferred alignment) would also involve no indirect impact to ancient or potentially ancient woodland sites, and would not overlap with Sites of Special Scientific Interest Impact Risk Zones. The reference case had a high indirect impact on a number of ancient woodland sites, and a large overlap with the Impact Risk Zones and the Weaveley and Sand Woods.

Biodiversity and habitats: EWR Co has taken into account the impact of the proposed route alignments on ecology and biodiversity (assessment factor 14.5). Route Alignments 5, 6 and 8 would overlap with the Impact Risk Zone (IRZ) to the Weaveley and Sand Woods SSSI, risking an indirect impact to the interests of the site. Route Alignment 1, an emerging preferred alignment at NSC, would have the potential to impact a greater number of priority habitats than other route alignment options. However, it is considered that this impact could be mitigated. EWR Co has committed to delivering biodiversity net gain, which requires that habitats for wildlife (including woodland) are enhanced and left in a measurably better state than they were pre-development. Further information on EWR Co's plans for achieving biodiversity net gain will be provided during the statutory consultation. EWR Co intends to build on the commitment of 10% biodiversity net gain made in relation to the part of EWR between Bicester to Bletchley. To achieve this, the company will continue to

prioritise avoiding high value and priority habitats. EWR Co will also consider enhancing some existing habitats and look at opportunities to create new habitats. Further information on plans for achieving biodiversity net gain will be provided during future phases of consultation. There is a colony of barbastelle bats in Wimpole and Eversden Woods Special Area of Conservation (SAC) located within the route option area and within 3-4km of the emerging route alignments between Bedford and Cambridge. EWR Co has carried out a number of surveys to better understand the barbastelle population in the area and plans to carry out further bat surveys as the design develops. The design has been developed to mitigate impacts on the bats in this area through measures such as green bridges and/or tunnels. In regard to the habitats highlighted by respondents: • All alignments are expected to have a direct impact on a line of trees and fields directly north of Carriage Drive and neighbouring Clapham Park Wood, but not expected to have a direct impact Clapham Park Wood itself. • Alignments 1 and 6 pass just north of Graze Hill village so would potentially directly impact these habitats. • Alignments 1 and 9, the emerging preferred alignments at NSC, would pass through fields which are expected to be associated with Westfield Farm, Comberton so would potentially directly impact this habitat. • As noted above Route Alignments 5, 6 and 8 would overlap with the Impact Risk Zone (IRZ) to the Weaveley SSSI, but direct impacts would be expected. Based on the designs presented at NSC, we do not anticipate directly impacting Hardwick Wood SSSI, Mowsbury Hillfort Country Wildlife site, sites nearby Knapwell including Overhall Grove Nature Reserve and RSPB Hope Farm, or woodland areas neighbouring Renhold. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts and will continue to consider how we can best avoid impacts on these habitats as we develop the design. EWR Co is undertaking a programme of habitat surveys and species-specific surveys to understand where species and habitats are in the landscape near the new railway and how the habitats are used. These will cover a range of species and habitats that have been mentioned by respondents and will include protected species. The findings from these surveys will inform the design of the scheme, with the aim of

avoiding, reducing, or mitigating identified impacts and, if necessary, compensating impacts. An Environmental Impact Assessment (EIA) of the final route alignment will be completed for the Environmental Statement which will identify impacts of the scheme on habitats and wildlife and outline the plans to mitigate these.

Noise disturbance to wildlife: noise impacts to wildlife will be assessed as the scheme develops and opportunities will be sought to reduce noise pollution through the design of the preferred route alignment. The Environmental Statement will then assess the noise pollution impacts of the final route alignment so that they can be mitigated where appropriate, during both construction and operation of the scheme.

Concerns re: ecological surveys, level of mitigation: all ecological surveys are planned and undertaken in consideration of recognised best practice and in discussion with Natural England, to ensure that they are as robust as possible to inform required mitigation and the Environmental Statement. All protected species mitigation will be in accordance with best practice and legal requirements, as a minimum. Mitigation for potential impacts to important habitats will be developed in consultation with relevant stakeholders, such as Natural England and local wildlife trusts.

Green belt land: EWR Co appreciate the concerns around the impacts on the green belt and will work to identify and reduce impacts and protect it wherever reasonably practicable. We recognise that the countryside, parks and green spaces, and access to them is important and will work to reduce impacts. Cambridge is surrounded by designated green belt which means that the railway would pass through it no matter which route option or route alignment it uses to approach the city. All alignments would have broadly the same impact on green belt land, so this is not a differentiating factor. Throughout the design process, EWR Co will seek to avoid, reduce and mitigate adverse impacts to green belt land as far as is reasonably practicable. Impacts of the scheme on the environment (including visual impacts) will be

A considerable number of respondents expressed general concern about the potential negative impact of Alignment 1 on the environment. The primary causes of concern for these respondents included this alignment travelling through agricultural land, and increased carbon emissions from both construction vehicles and the trains themselves. Many respondents voiced concern that this alignment could damage woodland along the route, particularly at Clapham, Ravensden and Highfields Caldecote. A considerable number of respondents expressed concern about the potential negative impact of this route on wildlife in the area. These respondents mentioned that this route could affect priority habitats, such as protected biodiversity areas under Bedfordshire County Council's biodiversity plan. These respondents claimed that the line could disrupt wildlife habitats along the route, as well as important travel and foraging corridors. Specific areas included Knapwell, Highfields Caldecote and Clapham. Several respondents also claimed that Alignment 1 would be more damaging in this regard than other alignments. They also felt that the proposals have failed to take this into account. Several respondents claimed that this alignment could increase flooding in the area as embankments and cuttings could restrict and disrupt drainage in an area which is already relatively prone to flooding.

provided in the Environmental Statement, submitted as part of the consent application, alongside plans for appropriate mitigation.

EWR Co has taken account of the environment at all levels, including local environments. Throughout the design process, EWR Co is following the environmental mitigation hierarchy which prioritises seeking opportunities to avoid significant adverse environmental impacts and, where this isn't possible, then aims to reduce and mitigate impacts. Environmental appraisals appropriate for this stage have been undertaken to give an indication of potential environmental impacts that would apply from selecting one of the route alignments. When the final route alignment has been decided, a detailed Environmental Impact Assessment will be undertaken in accordance with UK legislation which will set out the environmental impacts of the scheme. This will allow mitigation requirements to be identified and incorporated into the proposals, either as mitigation embedded within the design itself or as mitigation within the Code of Construction Practice (CoCP), or an equivalent document, which will set out how temporary construction-related impacts on the environment will be managed. Overall, it is considered that Route Alignment 1 represents a major improvement in environmental impacts when compared to the Reference Case (which is represented by Route Alignment 8), and this was one of the differentiating factors in the decision to choose Route Alignment 1 as an emerging preferred option at NSC. It is expected that Alignment 1 would need to cross borrow pits used by the A428 Improvement Scheme. This is taken account of as part of the design and EWR Co is working closely with the A428 project team.

Agricultural land: with regard to impact on agricultural land, Route Alignment 1 would likely impact approximately 35 farm holdings, the fewest of all route alignment options. However, Route Alignment 1 would require more agricultural land than other route alignment options, due to its increased total length. Route Alignment 1 is considered to be neutral in comparison to the Reference Case (Route Alignment 8) in relation to the Agriculture, Forestry and Soils Assessment Factor (14.1). The design is based on proven construction practices that have been carried out successfully on other projects which will

include drainage design for cuttings and embankments. Utility diversions, protection and the relocation of farm irrigation infrastructure may be required but these works would be relatively short in duration, and EWR Co will work with farmers and landowners to ensure a comparable supply is maintained during construction. More information about impact on farms is covered in the Impact on farms and local business row.

Carbon: EWR Co has taken into account the carbon emissions associated with the construction of each of the route alignment options (assessment factor 14.3). In this regard, Route Alignment 1 would result in an increase to track length required. However, it would require fewer bridge and viaduct structures, and a decrease in emissions associated with earthworks. As a result of value management, there is an opportunity to reduce carbon emissions associated with construction yet further. For the selected carbon 'hotspot' assets considered in the assessment, Route Alignment 1 has a 32% saving in carbon footprint compared to the Reference Case, and this represents the lowest carbon footprint of all shortlisted route alignments. Route Alignment 1 is considered to represent a major improvement to the Reference Case (Route Alignment 8) in relation to assessment factor 14.3, Climate. The impacts of operational carbon emissions have not been calculated at this stage and are not considered to be a differentiator between options. However, operational emissions will form part of the next stage of assessment and be presented within the Environmental statement.

Woodland: the potential impacts to woodland have been taken into account in the assessment of route alignment options (assessment factor 14.5, Ecology and biodiversity). Route Alignment 1 would not result in impacts to confirmed and potential ancient woodland and would not impact Great Woods. Route Alignment 1 is considered to represent a minor improvement to the Reference Case (Route Alignment 8) in relation to this assessment factor. North of Cambourne, Alignment 1 would result in some areas of woodland loss, namely at All Angels Park, Highfields Caldecote and trees lining Bourne Brook. Based on the designs presented at NSC, we do not anticipate directly impacting

woodland at Clapham, Ravensden or Knapwell. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts and will continue to consider how we can best avoid impacts on this woodland as we develop the design. All route alignment options would require some loss of woodland, which is minimised across the entire route so far as possible, and this was therefore not a differentiating factor. Route Alignment 1 would not impact Bushy Common of Langlands plantations as these are located away from the route to the south of Abbotsley. EWR Co will continue to follow the environmental mitigation hierarchy throughout design development, seeking to avoid significant adverse effects on woodland, and where this isn't possible, aim to reduce and mitigate impacts of the scheme.

Ecology and biodiversity: EWR Co has taken into account the impact on ecology and biodiversity (assessment factor 14.5) and Route Alignment 1 would have the potential to impact a greater number of priority habitats than other route alignment options, including at locations listed by respondents. Route Alignment 1 is considered to represent a minor improvement to the Reference Case (Route Alignment 8) in relation to this assessment factor. Alignment 1 would not encroach into the Weaveley and Sand Woods SSSI Impact Risk Zone. It is considered that impacts could be mitigated, and EWR Co has committed to delivering biodiversity net gain for the scheme. To help achieve this, EWR Co will consider enhancing some existing habitats and look at opportunities to create new habitats. Further information on EWR Co's plans for achieving biodiversity net gain will be provided during the statutory consultation. EWR Co is mapping where the new railway may cross and border habitats used by other important protected species, such as badgers, great crested newts and bird species, in order to consider how best to avoid impacting them altogether or to mitigate impacts upon them. A programme of habitat surveys and species-specific surveys is designed to help understand where species and habitats are in the landscape and how they are used, enabling the Project to avoid, reduce, mitigate and if necessary, compensate for identified impacts throughout the design of the railway. For example, EWR

Co will consider where to enhance or create wildlife corridors and green infrastructure where appropriate. In relation to the internationally important Eversden and Wimpole Woods Special Area of Conservation (SAC), EWR Co has undertaken an appraisal of the potential for impacts and its ability to mitigate them. Using the information available at this stage in project development, EWR Co has concluded that the impacts on the site are capable of mitigation. This will be kept under review as the design of the project develops. EWR Co will continue undertaking a programme of habitat surveys and species-specific surveys to help inform the design with the aim of avoiding, reducing, mitigating and, if necessary, compensating for identified impacts of the scheme on wildlife and habitats.

Heritage Assets: EWR Co has taken into account the impact on historical assets (assessment factor 14.9) and the route alignment is in close proximity to significantly fewer listed buildings and Scheduled Monuments than the Reference Case (Route Alignment 8). Route Alignment 1 is considered to represent a major improvement to the Reference Case (Route Alignment 8) in relation to this assessment factor. It avoids the complex heritage resource area of the Bourn Valley (by routing north of Cambourne) which provides additional improvement. The alignment passes within 500 metres of three conservation areas (Harlton, Toft and Bedford), significantly less than the Reference Case. As far as is reasonably practicable EWR Co will aim to avoid harm to the setting of designated heritage assets, and in order to do this, early identification and surveys of those assets most likely to be affected will be carried out so the scheme can be designed to avoid these and where this is not possible, incorporate appropriate mitigation measures into the design.

Flood risk: with regard to flood risk, EWR Co has taken into account potential impacts from each route alignment option, as detailed in assessment factor 14.18. Route Alignment 1 would include a shorter crossing of the River Ouse flood plain compared to the Reference Case (Route Alignment 8), and also routes via the A428 near St Neots which has reduced flood risk. The area of Flood Zones crossed by Route Alignment 1 is comparable to other route

alignment options, and this was therefore not a differentiating factor. Landscape and visual impact All Route Alignment Options have the potential to cause adverse impacts on the rural landscape, and all include viaducts, embankments and other structures. EWR Co has taken into account these impacts as part of the environmental appraisal detailed in Appendix E of the NSC Technical Report. Route Alignment 1 would have notably fewer landscape impacts than the Reference Case (Route Alignment 8). This is due to avoiding impacts on landscape designations at Brickhill Country Park, the River Great Ouse valley and indirect impacts upon the character of Roxton Park. Route Alignment 1 would cause negative visual impacts to Chawston from the A1 viaduct, but would have reduced visual impacts to other areas, such as settlements to the south of Cambourne. Overall, the landscape and visual impact from Route Alignments 1 and 6 represent a minor improvement on the Reference Case (Route Alignment 8), and this was a differentiating factor in the decision to choose Alignment 1 as an emerging preferred option at NSC. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co will also consider further mitigation for visual impacts to help the scheme blend in with the local environment, such as landscape earthworks or sensitive placement of appropriate planting to soften the appearance of embankments. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of a future public consultation.

Noise and vibration: EWR Co has taken into account the potential noise impacts during both construction and operation during appraisal of the route

A considerable number of respondents expressed support for Alignment 8 as they feel it has a lower negative impact on the local environment. Several state that as this route mostly runs through a cutting, rather than on a viaduct, this would lessen its environmental impacts, as it would have less visual impact on the surrounding areas. This includes carbon dioxide emissions, which a small number of respondents claimed would be heavily mitigated by the cuttings, lessening the negative impacts on air quality from the line. Several respondents also stated that the alignment's more direct route would mitigate its environmental impacts, as the track would affect a smaller area. Many respondents stated that this option would have the least impact on wildlife and biodiversity, as the alignment travels through fewer priority habitats than other options, including at. Toft and the Great Ouse flood plain.

alignments (assessment factor 14.13). While all route alignment options are expected to cause some adverse noise impacts on communities, Route Alignments 1, 2 and 6 each represent a minor improvement to the Reference Case (Route Alignment 8) regarding noise impacts, due to a smaller number of dwellings potentially affected. However, overall this was not on its own a differentiating factor. Further information on this matter is covered in the Noise and vibration row.

Earthworks, viaducts and visual inputs: EWR Co has taken into account the visual impact that each route alignment option would have on the local setting (assessment factor 14.11). Alignment 8 is judged to have some very high visual impacts, particularly on residents of Renhold, Roxton and Crow End, with moderate impacts on other settlements including those south of Cambourne. Five of the route alignments would be deemed an improvement when compared to Route Alignment 8, and Route Alignment 1 (an emerging preferred alignment at NSC) would be a minor improvement. Mitigation measures, such as cuttings and planting, will be worked up during the next stage of design and more detail will be provided at the statutory consultation. While the use of viaducts would create adverse visual impacts on some local communities, they are required in order to reduce the impact on flood plains in the area. Alignment 8 would have the largest plan area of viaducts and bridges. In contrast, Alignment 1 would require a smaller number of viaducts and bridges, therefore reducing the visual impact of the scheme. EWR Co is carefully considering how the development can be designed to blend in with the local environment and are aware of concerns related to the visual impacts of viaducts. Alignment 8 would have the largest plan area of viaducts and bridges. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Further examples of where visual impacts are being considered are the potential use of landscape earthworks to soften the appearance of embankments and integrate them into the wider landscape context or using sensitive placement of appropriate planting to either screen views from sensitive receptors, or to soften the

appearance and presence of engineering earthworks. Earthworks will be planned to re-use excavated materials, including the sustainable re-use of soils and protection of agricultural land capability, and the use of imported material will also be avoided wherever reasonably possible to ensure efficiencies and reduce carbon impacts. Earthworks features such as slopes and earth mounding to immediately screen or reduce views of the railway will be integrated within the existing character of the rural and urban landscapes through which the railway is planned. In addition, where possible the landscape earthworks and screening will be used to provide natural noise barriers. Opportunities to further enhance this will be explored, such as by the addition of vegetation, protecting agricultural land capability and restoring land to agriculture, enhancements for ecological compensation or be shaped to enhance the settings for heritage features and buildings will be considered. Earthworks will also be designed where reasonably practical to reduce the impact upon on communities, including on features such as public rights of way and existing high value vegetation and trees. EWR Co selected the NSC emerging options as Route Alignment 1 and 9 based on Assessment Factors, concluding that a more direct route doesn't correlate to fewer environmental impacts as acknowledged in Assessment Factor 14.3. Alignment 1 results in a decrease to the bridge and viaduct areas required compared to the reference case, which in turn results in a decrease to the associated GHG emissions. Alignment 1 also results in a significant decrease to GHG emissions associated with earthworks, and a lower carbon footprint (approximately 32% saving), when compared to Alignment 8. Habitat and priority landscape EWR Co is looking to ensure that landscape mitigation measures are closely integrated with the ecological requirements of both the project and the wider area to ensure that the environmental legacy of the works is positive and to support EWR Co's commitment to Biodiversity Net Gain. In relation to wildlife and biodiversity, Route Alignment 8 would involve a large overlap with the Impact Risk Zone (IRZ) to the Weaverley and Sand Woods SSSI, risking an indirect impact to the interests of the site, and further indirect impacts to a high number of ancient (or potentially ancient) woodland sites (within 50m of those sites). It involves a relatively low impact to mapped priority habitat areas

such as Toft and the Great Ouse flood plain both in terms of extent of impact and number of sites. In comparison, Route Alignment 2 and the emerging preferred options at NSC, Route Alignments 1 and 9, would involve no overlap with SSSI IRZs, and Route Alignment 6 would have a reduced overlap. Route Alignment 1 would include lower impacts on priority habitats, and represents a minor improvement against the Reference Case Alignment 8 in this regard. Loss of farmland Whilst Route Alignment 1, an emerging preferred option at NSC, would require a greater length of farmland to be crossed, it would impact fewer holdings than Route Alignment 8. Therefore, it is judged as neutral compared to the Reference Case. EWR Co understands the importance of agriculture to the communities the railway will serve and is focused on finding solutions that avoid, reduce or mitigate adverse impacts on land use and agricultural holdings. At each stage of the planning and development process, the company will assess the environmental impacts on important areas such as agricultural land (including best and most versatile (BMV) land) and the countryside. As part of this, EWR Co is exploring ways to reduce the impact of the railway on agricultural land holdings and soil resources. To better understand how the land is used, EWR Co will continue to work with landowners, occupiers and land managers to gather information that will help inform the design process. Demolition of homes It is not correct that Route Alignment 8 would require the least demolition of homes, as it is expected to require the demolition of eight properties. The emerging preferred route alignments at NSC Route Alignments 1 and 9 would likely require the demolition of four properties and three properties respectively. Both of these options demonstrate a minor improvement to Route Alignment 8. The majority of the demolitions are located around Broadway, Bourn, and an isolated property near Sandy. Air Quality When considering air quality, Route Alignment 8 would have a neutral impact. All but one of the other alignment options are judged to be either a minor or major improvement on this so Alignment 8 is therefore the joint worse performing alignment in terms of air quality. CO2 emissions In terms of climate impact, which includes consideration of CO2 generation, Route Alignment 8 is judged to be the worst performing alignment, with all other alignments being a minor or major

improvement. This is due to the increase in viaducts and bridges required for Route Alignment 8 compared to the other route alignments. A full environmental statement will be submitted as part of the development consent order application and will include a full whole life assessment of carbon emissions for the preferred alignment, including the embodied carbon of the materials used to construct the scheme, which will make up a significant proportion of the total emissions. This assessment will include emissions during operation which will consider any energy use, including where additional energy may be required for hills etc. The significance of those emissions against regional, national and/or international carbon budgets and targets will be set out. EWR Co aims to deliver a net zero carbon railway, in line with existing and developing net zero carbon policy, legislation and commitments at a global, national and local level which requires the UK to reach net zero greenhouse gas emissions by 2050. As detailed in the Consultation Technical Report provided as part of the 2021 non-statutory consultation, environmental factors including Greenhouse Gases (GHGs) have been considered as part of developing the proposed route alignments. As the Project advances, EWR Co will continue to develop its approach to delivering on its Net Zero Carbon Railway ambition and provide further information around the scope of the target during a phase of statutory consultation. Great Ouse floodplain It is not correct that this route would avoid the River Great Ouse flood plain as all route alignment options include a crossing of this flood plain. Route Alignment 1, an emerging preferred option at NSC, would require a shorter crossing of this large flood plain, and therefore is an improvement on Route Alignment 8. EWR Co takes climate change and the future risk of flooding seriously and will continue to develop its approach to understanding and mitigating any project-related risks linked to climate change. This includes considering changes to climatic conditions and extreme events within the design of the project. EWR Co will develop flood risk assessments to help inform the design process, which will incorporate taking account and planning for the future requirements of a changing climate. Further information will be provided during a phase of statutory consultation. Work is ongoing in this area and the project has established and have ongoing and regular engagement

with the Environment Agency, to share information, data and modelling to support this work. EWR Co is also looking at ways to reduce flood risk by considering appropriate flood protection measures and flood compensation. Active travel EWR Co will ensure that public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our station designs. With regard to the station location options, and supporting active travel, the development of first mile/last mile strategies will be considered for the preferred option, Route Alignment 1 (Tempsford variant), to mitigate such matters. This was therefore not considered to be a differentiating factor. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

#### **Matter Raised**

A considerable number of respondents voiced concern over the impact Route Alignment 8 would have on properties in the area. Several stated that this route alignment would cause vibration that could result in structural damage to historic buildings. Several respondents expressed concern about the demolition of homes, with some stating that any demolition is unacceptable. Several respondents also raised concerns that the alignment could have a detrimental effect on their house prices. Some mentioned that the alignment would be close to new housing developments, which could make the area less attractive to new residents.

#### **EWR Co Response**

Demolitions Assessment factor 14.4 includes an assessment of the number of properties that would need to be demolished for each route alignment option. Route Alignment 8 would impact settlements including Renhold and Abbotsley and would require the demolition of eight properties. Most of the demolitions are located around Broadway, Bourn, and an isolated property near Sandy. Route Alignment 1, an emerging preferred option at NSC, would require the demolition of four properties, demonstrating a minor improvement. Route Alignment 1 would also have the potential to affect a fewer number of residential properties regarding noise and vibration impacts (assessment factor 14.13). Noise and vibration and impacts on historic / listed buildings. As part of the environmental assessments detailed in Appendix E of the NSC Technical Report, EWR Co considered the impact on the Historic Environment (assessment factor 14.9). This included potential impacts to listed buildings, Scheduled Monuments, and conservation areas. The assessments completed at this stage found that Route Alignment 8 performs worse than Alignment 1, an emerging preferred alignment at NSC, and would have an adverse impact on the complex heritage resource area

## **EWR Co Response Matter Raised** of the Bourn Valley and the route would be within 1km of approximately 232 listed buildings. This is the most of all route alignment options with a total of eight listed buildings being located within Renhold. Due to the scale and nature of EWR, noise and vibration impacts are inevitable, and all route alignment options would impact some villages. As noted in the discussion of assessment factor 14.13 (Noise and Vibration) in Appendix E, Route Alignment 8 would result in adverse impacts to several communities, though with appropriate mitigation, this potential impact could be reduced to a smaller number of communities at Ravensden Church End, Woodend Lane, Bedford Road and Crow End. EWR Co considers that impacts on communities could be reduced by routing EWR close to the existing travel corridor of the A428, as this would allow some adverse impacts to be concentrated in this corridor rather than in areas not already subject to development. By routing along the A428 travel corridor, Route Alignment 1 would have a reduced impact on heritage assets and properties. This was a differentiating factor in the decision to choose Route Alignment 1 as an emerging preferred route option at NSC. Route Alignment 1 would also affect fewer residential properties in terms of noise and vibration impacts (assessment factor 14.13), though this was not considered to be a differentiating factor on its own. The impact of vibration from construction activity and operation of the railway on specific building structures has not been specifically assessed at this stage. EWR Co will take this into account for future assessments, should these properties be in the assessment corridor. As set out in paragraph 4.3.26 of the Consultation Technical Report, EWR Co will seek ways to construct the works that minimise vibration but inevitably some activities, such as piling (the construction of deep foundations for structures), will be necessary. In such instances, EWR Co will make sure that working hours are limited and that surveys will be carried out to assess and manage the risk to homeowners where properties are likely to be affected. Proximity to new housing developments: in designing options for the railway to date, EWR Co has kept abreast of proposals for new housing across the route. In selecting the preferred route alignment following the 2019 consultation, EWR Co took account of the ability of the new railway to serve developments in the Bedford and St Neots areas. The potential impact of the scheme on existing housing – including housing that has been granted planning permission and is in

#### **Matter Raised EWR Co Response** the course of being built – was taken into account when considering detailed potential route alignments. Route Alignment 8 is not expected to impact any committed developments, and all route alignments were considered neutral in this regard. This was therefore not a differentiating factor. In addition, EWR Co has also considered not only how the railway might interact with existing housing and current projects, but how it might best support future housing development by providing cost-effective, sustainable and accessible public transport options for new residents and settlements. This built upon the preference for Route Option E and has formed a key part of the approach to selecting a preferred route alignment. Devaluation of property: where land is acquired or proposed to be acquired, the Compensation Code sets out the circumstances in which compensation is payable. EWR Co provided a guide to compulsory purchase compensation (Guide to Compulsory Acquisition and Compensation). Compensation is also available for properties in proximity to the new railway which may be affected by various physical factors of the operation of the railway once it is in use. This is referred to as Part 1 compensation, and we included a guide on the website – Guide to Part 1 claims. EWR Co consulted on a Proposed Need to Sell Property Scheme at the same time as the main non-statutory consultation and has introduced the Proposed Need to Sell Property Scheme which aims to assist eligible property owners who have a compelling need to sell while the EWR project is in development and delivery, but who have been unable to do so other than at a substantially reduced value because of the EWR project. The Proposed Need to Sell Property Scheme is separate to the statutory blight notice process and (as the trigger for statutory blight is the submission of a DCO application) it provides early support for eligible property owners who can satisfy the criteria of the Proposed Need to Sell Property Scheme. The details are available in The Guide to the Proposed Need to Sell Property Scheme on the EWR Co website. A considerable number of respondents voiced concern that this alignment would contribute to unacceptable levels of noise and vibration in the area. Most of these General noise and vibration impact: EWR Co has taken into account the potential respondents claimed that the prevailing wind and hills in the area, combined with noise impacts during both construction and operation during appraisal of the the embankments and viaducts, would amplify the noise caused by trains passing route alignments (assessment factor 14.13). While all route alignment options are along the route. Several respondents were specifically concerned about the expected to cause some adverse noise impacts on communities, Route Alignments

#### **Matter Raised**

potential health effects of the noise from the route, as they believe the noise from trains could disrupt sleep for local residents, particularly if the trains run at night. A small number mentioned that the construction of embankments could be particularly noisy as well.

#### **EWR Co Response**

1, 2 and 6 each represent a minor improvement to the Reference Case (Route Alignment 8) regarding noise impacts, due to a smaller number of dwellings potentially affected. However, overall this was not on its own a differentiating factor. EWR Co will continue to consider noise and vibration impacts in the next phase of design and seek opportunities to reduce these where possible, including for properties in Highfield Caldecote and New Inn Farm. Robust assessments of noise and vibration impacts of the final route alignment (which will also consider potential night-time operations and impacts on residents) will be undertaken for the Environmental Statement. Appropriate mitigation such as noise barriers will then be identified and embedded into the design. EWR Co is also continuing to explore ways to reduce noise and vibration impacts when EWR services are operational, such as considering the types of trains used and track technologies. EWR Co proposed operational hours for passenger services in Appendices A and B of the 2021 Consultation Technical Report, which referred to a potential public facing timetables (planned trains in passenger services) to provide some initial guidance. There will also be less intensive train movements as required outside these hours for infrastructure maintenance, inspection, freight and other activities as part of the national rail network. We will continue to work on the concept of operation to inform the operational timetable. A Noise and Vibration Policy for the Project will also be produced which will outline EWR Co's commitment to managing noise and vibration during construction and operation. The construction contractors who will build the scheme will be required to have due regard to the temporary construction-related adverse impacts in compliance with the Code of Construction Practice, and mitigation measures will also be put in place to reduce noise and vibration impacts as far as practicable. These may include the use of temporary screening and use of quieter or lower vibration construction methods and equipment. EWR Co will endeavour to schedule activities which are likely to produce higher levels of noise to weekday daytime hours wherever possible. Occasionally, it will be necessary to work at other times and EWR Co will engage with local people and communities to implement arrangements which are least disruptive. Environmental impacts – and potential resulting impacts on human health – will be considered throughout scheme development with the aim of avoiding and then reducing them where possible through the design. The impacts of the final route alignment on the health and wellbeing of local communities will

#### Matter Raised EWR Co Response

A considerable number of respondents voiced concern that this section could contribute significantly to noise in the area. Many of these respondents stated that North Bedfordshire has a low level of noise currently, and any additional noise from construction or trains would be particularly noticeable. Many respondents also claimed that the use of viaducts and embankments would compound noise impacts. Several respondents remarked that they live in the area specifically for its tranquillity, and that it is unfair that they could now experience noise that they were not expecting.

then be assessed in a dedicated chapter of the PEIR published at the statutory consultation, and then subsequently within the Environmental Statement, which will detail the mitigation to be provided where appropriate.

Noise and vibration: potential noise impacts to residential communities during both construction and operation were considered during appraisal of the Route Alignments (assessment factor 14.13). While all route alignment options are expected to cause some adverse noise impacts on communities, Route Alignments 2, 6 and emerging preferred alignment at NSC Route Alignment 1 each represent a minor improvement to the Reference Case (Route Alignment 8) regarding noise impacts, due to a smaller number of dwellings potentially affected. However, overall, this was not differentiating factor. EWR Co will carry out comprehensive assessments and will use industry-leading computer modelling, which can incorporate information on local geology to simulate potential noise and vibration impacts along the whole route as part of the assessments on any mitigations required. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include information regarding the existing baseline noise environment, together with construction and operational noise limits having had regard to the appropriate guidance and legislation. Construction and operational noise levels generated from the proposed works will also be presented as part of the PEIR which will form elements to be considered at the statutory consultation. A full environmental statement will then be submitted as part of the development consent order application. Additionally, further detail will also be provided on the freight strategy, and the approach to avoiding or reducing potential impacts from freight trains which may run on EWR, during the statutory consultation. EWR Co will also consider other factors that may help reduce noise and vibration, such as the choice of trains and track technology used when the railway is operational. A project Noise and Vibration Policy will also be produced which will outline EWR Co's commitment to managing noise and vibration during construction and operation. The construction contractors who will build the scheme will be

Matter Raised	EWR Co Response
	required to have due regard to the temporary construction-related adverse impacts in compliance with the Code of Construction Practice, and mitigation measures will also be put in place to reduce noise and vibration impacts as far as practicable. These may include the use of temporary screening and the use of quieter or lower vibration construction methods and equipment.
A large number of respondents expressed concern about the potential impact of this route alignment option on local people and communities near the route. In particular, these respondents stated that the route would have a negative impact on the rural 'feel' of their communities. Several respondents also stated that there would be no local benefit to their communities from the route alignment. Many respondents remarked that this route would have a direct impact on quality of life for local people, including their mental health. These respondents remarked that they had moved to the area in order to avoid urbanisation, and so are concerned by the possibility of the presence of large infrastructure. Specific villages mentioned by respondents as potentially being affected include Great Barford, Knapwell, Roxton and particularly Renhold.	Disruption to residents / villages / businesses, local amenities and wildlife: both Route Alignments 1 and 9, the emerging preferred alignments at NSC, are considered to be a minor improvement on the Reference Case (Route Alignment 8) in relation to community impacts overall, as explained in the discussion of assessment factor 14.4 in Appendix E of the NSC Technical Report. This appraisal took into account the potential impacts on Great Barford, Knapwell, Roxton and Renhold. Route Alignment 9 would route approximately 3km north of Renhold and approximately 5km north of Great Barford. Route Alignments 1, 2 and 9 would pass further from Renhold, Great Barford and Roxton than route alignments options that pass further south (Route Alignment 2 and 8). Route Alignment 9 would also pass approximately 3km south of Knapwell. In terms of potential impacts to community and recreational facilities specifically, all options have the potential to result in amenity or isolation impacts, particularly during construction. All route alignments are therefore considered neutral in comparison to the Reference Case. Provision will be made during construction to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignment 9 between Bedford and Tempsford Station, EWR Co has developed Alignment 1 (Tempsford variant). This alignment is a variation of Alignment 1, which deviates from Alignment 1 south of

the east of Tempsford Station, Alignment 1 (Tempsford variant), would then follow the proposed route of Alignment 9, which merges with Alignment 1 east of

Residents, communities and other stakeholders will be able to provide feedback

Little Barford and then runs to a station north of Cambourne. Alignment 1 (Tempsford variant), would significantly reduce and/or mitigate the potential impacts at Ravensden, Renhold and Roxton associated with Alignment 9.

# **Matter Raised EWR Co Response** on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Severance: all route alignments options could have the potential to create some level of severance between communities and services, although measures will be put in place to mitigate such severance at later design stages. Route Alignment 9 is expected to cross 64 Public Rights of Way (PRoWs). All PRoW that would be crossed by the new railway are assumed either to be maintained in situ by a bridge or underpass or to be diverted. During construction, EWR Co will aim to maintain connections that are intended to be retained after the Project is completed, even if they must be temporarily diverted, including to key community facilities. Arrangements for any diversions will involve discussion with appropriate parties at relevant stages with the aim of both mitigating disruption to the local community and enabling reasonable conditions for the progression of the works. The impact of any changes to access will be assessed in the environmental impact assessment process and reported as part of the Preliminary Environmental Information Report and Environmental Statement, with the aim of reducing adverse impacts of the scheme. In parallel, an Equality Impact Assessment will also be undertaken to capture potential impacts, both positive and negative, on protected characteristic groups (PCGs) as a result of the Project, and how these have been taken into account. Negative impact on health and wellbeing; quality of life: there is no reason to suppose that Route Alignment 9 would have a different (if any) effect upon physical or mental human health to any other route alignment. However, throughout the scheme development, EWR Co will consider a range of matters including noise and vibration, air quality, potential impacts on Public Rights of Way (PRoWs) and land and property requirements with the aim of avoiding and then reducing impacts – and potential resulting impacts on health and quality of life – where possible through the design. The impacts of the final route alignment on the health and wellbeing of local communities will then be assessed in a dedicated chapter of the Preliminary Environmental Information Report (PEIR) published at Statutory Consultation, and then subsequently within the Environmental Statement, which will detail the mitigation to be provided where appropriate.

#### **EWR Co Response Matter Raised** Inaccessible station locations. EWR Co has considered the accessibility of all potential station locations. Both proposed station options in Cambourne would be located close to existing communities. Cambourne North station is separated from Cambourne by the A428 which may slightly reduce connectivity to the existing settlement, compared to Cambourne South, particularly for active travel options such as walking, wheeling and cycling. However, it is believed that this could be mitigated by a foot and cycle bridge over the A428. The development of first mile/last mile strategies will also be considered for the preferred option to mitigate such matters. This was therefore not considered to be a differentiating factor. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. EWR Co will work with local authorities and transport bodies to ensure public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our station designs. The route will not effectively serve a large number of residents; minimal benefits to residents and businesses; EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g. you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spillovers. Also, businesses will be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. EWR Co has considered the amount and location of stations along the route. The proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, as well as helping to ease some of the upwards pressure on the housing market. EWR Co will develop a Preliminary Environmental Information Report (PEIR) to describe the likely environmental effects of the proposals, which will also include information on the

expected socio-economic impacts of the scheme. Specifically, the PEIR will consider the impact on the local economy in terms of employment and supply

# **EWR Co Response Matter Raised** chain, and land take, access, and disturbance impacts on business and commercial premises. The PEIR will be presented at the statutory consultation. A full Environmental Statement will then be submitted as part of the DCO application. Routes not aligned with existing / proposed development; concern over increased development around the station: EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South and so is more likely to be realised. The housing development at Cambourne North is expected to be able to retain separation from and between existing settlements such as Papworth Everard, Knapwell and Elsworth. EWR Co is proactively monitoring third-party planning applications that have the ability to affect EWR. Where planned developments are identified as having potential to conflict with, or affect EWR, suitable representations will be made to the Local Planning Authority. In addition, EWR Co has also considered not only how the railway might interact with existing housing and current projects, but how it might best support future housing development by providing cost-effective, sustainable and accessible public transport options for new residents and settlements. Significant noise, light, air and visual pollution for residents: although Route Alignment 9 would pass within 500m of the highest number of residential properties (1,596) compared to the other route alignment options, it offers the ability to concentrate impacts in the A428 corridor rather than in areas not already subject to development. EWR Co has considered the potential noise, air quality and visual impacts on communities and settlements along the route, and considers Route Alignment 9 to be neutral in comparison to the reference case (Route Alignment 8) on these matters. In terms of noise and vibration impacts, Route Alignment 9 is considered as neutral compared to the reference case, due to the similar number of dwellings potentially affected. As the scheme develops,

#### **Matter Raised EWR Co Response** opportunities will be sought to avoid and reduce potential noise impacts through the design of the preferred route alignment, with mitigation measures such as noise barriers being embedded into the design where appropriate. EWR Co will also continue to explore ways of reducing noise and vibration impacts when EWR services are operational, such as considering the types of trains used and track technologies. With regard to air quality impacts, Route Alignment 9 would impact slightly more properties than the reference case (Route Alignment 8) but would require a slightly lower volume of earthworks and is therefore considered to be neutral compared to the reference case. EWR Co will seek to reduce the impact the new railway may have on air quality through consideration of factors such as vehicles and equipment used during construction and operation, and the management of work sites to avoid and reduce any dust creation. Potential visual and landscape impacts were also taken into consideration as part of the environmental appraisal. While Route Alignment 9 would have a lesser impact on Cambourne, Wimpole and Eversden, the assessment identified that Route Alignment 9 would impact a number of landscape areas, including Brickhill Country Park, the River Great Ouse valley, All Angels Park and trees lining Bourne Brook. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. Additionally, EWR Co is considering how the development can be designed to blend in with the local environment through measures such as landscaping and screening to reduce visual intrusion. As designs for the Project develop, EWR Co will also consider the potential effects of light pollution and seek to avoid impacts on 'sensitive receptors', such as nearby residential areas or habitats. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them

to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include information on a range of

# **Matter Raised EWR Co Response** topics, such as noise and air quality, and will be presented at the statutory consultation. A full Environmental Statement will then be submitted as part of the development consent order application. Concerns over pressure on local infrastructure; impact on existing public transport infrastructure: EWR Co will prepare a Transport Assessment to consider the impact of the scheme on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. A Traffic Management Plan, prepared by EWR Co in consultation with relevant highway authorities and stakeholders, will also include measures aimed at maintaining safety for road users and reducing impacts of construction traffic, such as setting out the timing of traffic management measures. EWR Co is working closely with key stakeholders including Network Rail, National Highways and local councils to enable impacts on and interfaces with local infrastructure to be appropriately managed and opportunities explored. Objection to use of freight: EWR Co is working to understand what the potential capacity and demand would be on EWR for freight. These considerations did not materially affect the choices of route alignments. At this stage, it is not known how much freight would use the railway and when, as this is subject to government policy and market demand. However, as stated in section 3.10 of the NSC Technical Report, the maximum gradient of the railway would be no steeper than 1 in 80 to allow most types of freight train to use the railway and reduce the risk of them running at slower speeds that could cause delays to passenger services. Mitigation measures for impacts such as noise and vibration that are being designed as part of the scheme would also factor in the potential operation of freight on EWR. Further information on the freight strategy for EWR, and EWR Co's approach to avoiding or reducing potential impacts from freight trains which may run on EWR, will be provided at the statutory consultation. Security and anti-social: in terms of safety and security (in the context of potential increased anti-social behaviour), EWR Co is committed to developing, designing

#### **Matter Raised EWR Co Response** and constructing the railway such that safety and security risks are as low as possible, as required by the Sponsor's Requirements presented in Appendix A of the Non-Statutory Consultation Technical Report. In developing the design of the permanent railway and temporary construction works, EWR Co will consider measures to avoid the potential for anti-social behaviour, such as maintaining clear sight lines will be maintained around hoardings and fencing with no hidden corners in order to avoid, where reasonably practicable. These requirements apply to all alignments and were not considered to be a differentiating factor between alignments. A large number of respondents expressed concern about the potential negative impact of Alignment 9 on the local environment. In particular, a substantial General concern of damage to environment from route alignment; concerns number of respondents voiced concerns about woodlands and other habitats raised that the proposals conflict with what is set out in the OxCam Arc along the route, including woodlands at the Great and Little Early Groves, prospectus: on balance, it is considered that Route Alignment 9 (an emerging Hardwick Wood, Bourn Brook, and other ancient woodland at Caldecote, Toft, preferred option at NSC) represents a minor improvement on the reference case (Route Alignment 8) in terms of environment as it would have a smaller impact on Clapham and Renhold. These respondents claimed that the line would require the loss of trees, and that the division of woodlands would be damaging to the heritage assets, avoid the groundwater Source Protection Zone south of sensitive ecosystems of these areas, leading to further damage. A substantial Cambourne, and would also have reduced indirect impacts on confirmed and number express specific concern about wildlife in the area. Many respondents potential ancient woodland. There is a decrease in the number of structures remarked that Alignment 9 would impact habitats for various birds and mammals, associated with Alignment 9, and therefore a lower carbon footprint. However. including deer, badgers, rabbits, hares and owls. Several respondents also Route Alignment 9 would result in a greater loss of priority habitats. Further detail remarked that the noise from the line could scare or disturb the wildlife and is available in the Environmental Impacts and Opportunities in section 9.6 of the Technical Report. EWR will continue to consider the importance of environmental livestock along the route. sustainability in our activities and the decisions we make so that the scheme is designed, constructed and ultimately will be operated and maintained in an

environmentally responsible way that minimises negative environmental impacts. As part of this, the Project has committed to delivering biodiversity net gain. Biodiversity net gain requires that habitats for wildlife are enhanced and left in a measurably better state than they were pre-development. This approach supports the Government's 25-year Environment Plan. Further information on plans for

achieving biodiversity net gain will be provided during future phases of consultation. EWR Co is committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts. As part of this, the Project has committed to delivering biodiversity net gain. Biodiversity net gain requires that habitats for wildlife are enhanced and left

## **Matter Raised EWR Co Response** in a measurably better state than they were pre-development. This approach supports the Government's 25-year Environment Plan and the aspirations set out in the OxCam Arc prospectus. Concern of loss of farmland – groundwater and floodplains managed by farmers. Based on the length of Route Alignment 9, it would require more agricultural land compared to the Reference Case and is likely to impact approximately 39 farm holdings (based on available information). One of these 39 farm holdings would be likely to experience a major adverse impact from the construction of the scheme. In comparison, Route Alignment 1 (an emerging preferred alignment at NSC) is likely to impact approximately 35 farm holdings (based on available information). At each stage of design development, EWR Co is exploring ways to reduce the impact of the railway on agricultural practices and soil resources. EWR Co will continue to work with landowners and managers to gather information that will help inform the design process. During construction farm irrigation infrastructure may require protection or relocation, and EWR Co will work with landowners whose farm water supply reservoirs and associated irrigation system is significantly impacted to ensure that a comparable supply is maintained during the works. EWR Co will also seek to ensure that access to severed land for farmers and farm vehicles is maintained during construction. Concern of damage to ancient woodlands, SSSI woodland and trees with a TPO, woodland loss EWR Co is following the environmental mitigation hierarchy by seeking to avoid significant adverse effects on woodlands (particularly SSSI and ancient woodland) and where this isn't possible, seeking to reduce and mitigate impacts and if necessary, looking at compensation. EWR Co is looking to ensure that landscape mitigation measures are closely integrated with the ecological requirements of both the Project and the wider area to ensure that the environmental legacy of the works is positive and to support EWR Co's commitment to Biodiversity Net Gain. EWR Co will be considering the potential impacts on designated and non-designated environmental sites as the design of Alignments is developed. Alignment 9 would result in lower indirect impacts to confirmed and potential ancient woodland sites than the reference alignment and involves no overlap with Sites of Special Scientific Interest Impact Risk Zones (SSSI

IRZ), including Weaveley and Sand Woods SSSI IRZ. Route Alignment 9 would require the loss of five trees (based on available TPO, ancient or veteran data), which would be the highest number when compared to other Route Alignment

# **Matter Raised EWR Co Response** options. Route Alignment 1 (an NSC emerging preferred option) would require the loss of 3 trees (based on available TPO, ancient or veteran data) and would not impact ancient or potentially ancient woodland sites. Concerns raised regarding the fact that a station at Tempsford would have an undue impact on the countryside and wildlife: several environmental and local heritage areas have been identified in the vicinity of both the Tempsford site and St Neots site that would require appropriate mitigations to protect, including areas of ancient woodland, priority habitat, and county wildlife sites. More detailed assessments will be undertaken for the Preliminary Environment Information Report (PEIR) which will describe the likely environmental effects of the proposals, allowing them to be avoided or minimised where possible. The PEIR will be presented at the statutory consultation. Impact on ecology, habitats and biodiversity: • habitat loss and inadequacy of mitigation • displacement and fragmentation (including wildlife corridors, hedge and tree lines) • lakeside habitats • farmland habitats In relation to ecology and biodiversity, Route Alignment 9 represents a minor worsening in comparison to the Reference Case (Route Alignment 8). Although Route Alignment 9 involves no overlap with SSSI IRZs and slightly reduced indirect impacts to ancient (or potentially ancient) woodland sites, it has relatively higher impacts to mapped priority habitat areas. Route Alignment 9 would impact priority habitat 22 times, the highest of all alignments, compared to nine times as part of the reference case (Route Alignment 8) and 17 times as part of Route Alignment 1 (an emerging preferred alignment at NSC). Route Alignment 1 represents a minor improvement in relation to ecology and biodiversity when compared to the reference alignment. EWR Co will aim to maintain ecological connectivity by connecting or reconnecting fragmented areas of habitat to strengthen them, increase their future resilience, and promote the movement and migration of species. Green bridges, underbridges, and underpasses may be considered to mitigate severance of habitats and positively integrate with landscape character. EWR Co's preference will be to integrate the engineering and environmental requirements into a single feature. Mitigation measures are unsatisfactory and that it would take c.140 years for land to return.

#### **Matter Raised EWR Co Response** Irreplaceability of established habitats: EWR Co is committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts. As part of this, the Project has committed to delivering biodiversity net gain. Biodiversity net gain requires that habitats for wildlife are enhanced and left in a measurably better state than they were predevelopment. This approach supports the Government's 25-year Environment Plan. EWR Co intends to build on the commitment of 10% biodiversity net gain made in relation to the part of EWR between Bicester to Bletchley and will work with our stakeholders to do this. We will prioritise avoiding high value and priority habitats and where necessary enhance existing and create new habitats. Further information on plans for achieving biodiversity net gain will be provided during at the statutory consultation. Impacts to conservation areas and other areas of interest. EWR Co will avoid direct impacts on the most significant nationally and internationally designated environmental assets highlighted by consultees including, National Nature Reserves (NNRs), Ramsar Sites, Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs) and candidate Special Areas of Conservation (cSACs), Special Protection Areas (SPAs) and candidate Special Protection Areas (cSPAs) and ancient woodland. Potential impacts to conservation areas have also been considered as part of the historic environment assessment factor (14.9). This is further detailed in the Historic Environment section below. There is a colony of barbastelle bats in Eversden and Wimpole Woods Special Area of Conservation (SAC), located within the route option area and within 3-4km of the emerging route alignments between Bedford and Cambridge. EWR Co has carried out several surveys to better understand the barbastelle bat population in the area and plan to carry out further bat surveys as the design develops. These will be used to ensure that the design does not significantly affect the population of barbastelle bats, and EWR Co will develop a Preliminary Environment Information Report (PEIR) and Environmental Statement (ES) to describe the likely environmental effects of the proposals and report the results of survey work. The design has been developed to mitigate impacts on the bats in this area through measures such as green bridges and/or tunnels. Impacts to wildlife: • protected/vulnerable species. • badger colony south-east of Wayside FP • bird life and habitats • flora and fauna • bats • pollinating species EWR Co will ensure that

measures are in place to protect the flora and fauna of the corridor through which

Matter Raised	EWR Co Response
	construction works will take place. EWR Co is mapping where the new railway may
	cross and border habitats used by other important protected species, such as
	badgers, great crested newts and bird species, in order to consider how best to
	avoid impacting them altogether or to mitigate impacts upon them. A programme
	of habitat surveys and species-specific surveys is designed to help understand
	where species and habitats are in the landscape and how they are used, enabling
	the Project to avoid, reduce, mitigate and if necessary, compensate for identified
	impacts throughout the design of the railway. Mitigation measures, for protected
	species such as badgers and bats, will be implemented in line with legal
	requirements and best practice as a minimum. Often this will involve the use of
	alternative habitat provision, physical barriers and may involve the relocation of
	species to an alternative location. EWR Co will also consider where to enhance or
	create wildlife corridors and green infrastructure where appropriate. Alignment 9
	has no overlap with SSSI IRZs but has a relatively high impact on mapped priority
	habitat areas, including impacts to the highest number of priority areas. In
	comparison, Alignment 1 (an emerging preferred option at NSC) involves no
	overlap with SSSI IRZs, but relatively high impacts on mapped priority habitat
	areas. EWR Co is mapping where the new railway may cross and border habitats
	used by other important protected species, including the badger colony
	referenced by the respondent, in order to consider how best to avoid impacting
	them altogether or to mitigate impacts upon them. A programme of habitat
	surveys and species-specific surveys is designed to help understand where species
	and habitats are in the landscape and how they are used, enabling the Project to
	avoid, reduce, mitigate and if necessary, compensate for identified impacts
	throughout the design of the railway. For example, EWR Co will consider where to
	enhance or create wildlife corridors and green infrastructure where appropriate.
	EWR Co will develop a Preliminary Environment Information Report (PEIR) and
	Environmental Statement (ES) to describe the likely environmental effects of the
	proposals and report the results of survey work. This will include consideration of
	all potential impacts on wildlife, such as those from noise or other sources of
	pollution, as highlighted by the responded. Matters relating to flood risk are
	detailed in the section below.
A large number of respondents expressed opposition to the proposed route	Full assessments of the five route options were completed in 2019, including
alignments, or to Section D in general. Most of these respondents rejected all	understanding and using the feedback from the non-statutory consultation in

Matter Raised	EWR Co Response
options, but several rejected all of the more southern route alignments out of Bedford, while several others rejected all of the more northern route alignments.	early 2019. Details of these assessments can be found in the Preferred Route Option Report (East West Rail, 2020). These assessments were carried out using the Assessment Factors that had been previously agreed with the Department for Transport (DfT). The result of these assessments found that overall, Route Option E was the best performing for reasons listed in paragraphs 1.20 – 1.42 of the Preferred Route Option Report.
A large number of respondents expressed support for this alignment as they	Loss disruption to residents / villages / amonities fourer preparties impacted (inc.
considered it to have less impact on properties and communities in the area.  Many respondents stated that this alignment would avoid a substantial number of	Less disruption to residents / villages / amenities; fewer properties impacted (inc. heritage properties): EWR Co has considered the impacts of the proposed route
Many respondents stated that this alignment would avoid a substantial number of listed and historic properties, as well as properties in general, meaning that the physical impact on homes uses due to construction and operation rail use would be lower. A small number of respondents expressed support for this route alignment option due to the lower number of properties/houses that would be demolished. Many of these respondents also remarked that keeping the line away from homes could reduce the negative impact of this alignment on property values. A substantial number of respondents stated that this route would have the least negative impact on local communities. Most of these respondents remarked that this alignment would provide infrastructure to already more built-up settlements in the area, such as Cambourne and St Neots, while avoiding the less populous and more rural settlements such as Renhold and Tempsford. These respondents stated that this would be more fitting with the character of the area and would better align with the lifestyle choices of the local residents, while providing infrastructure more directly to more people. Several respondents also claimed that Alignment 1 has the opportunity to increase connectivity and community cohesion in the area, allowing St Neots and Cambourne to act as local hubs for their surrounding smaller villages, which could in turn lead to better	alignments during both construction and operation on local communities as part of assessment factor 14.4 (Community). Of all shortlisted route alignments, Alignment 1 would pass within 500m of (and therefore impact) the fewest number of homes and would require the demolition of four properties, which is a lower number of demolitions required than the Reference Case (Route Alignment 8). Route Alignment 1 also does not pass within 50m of community or recreational facilities and this was therefore not a differentiating factor in the assessment. Overall, Route Alignment 1 is considered to represent a minor improvement on the Reference Case in relation to this assessment factor. Proximity to listed buildings and Scheduled Monuments was also considered as part of assessment factor 14.9 (Historic Environment). Route Alignment 1 would pass within 1km of the fewest number of heritage assets, with no listed buildings and one Scheduled Monument within 250m of the alignment, and represents a major improvement on the Reference Case in this respect. EWR Co will develop a PEIR to describe the likely adverse and beneficial environmental effects of the proposals. The PEIR will include available baseline data and a preliminary construction and operation assessment of impact on residential properties, community facilities, recreational facilities, open space and PRoW. Information regarding the historic environment
transport options for all in the region. A small number of respondents also expressed support for the alignment as it avoids dividing villages, particularly Bourn and Brickhill.	baseline, preliminary construction and operation assessment of direct impacts and the setting of heritage assets, buried archaeology and historic landscapes will also be included in the PEIR. This will be presented at the statutory consultation with a full Environmental Statement being submitted as part of the DCO application. EWR Co will also prepare a Code of Construction Practice (CoCP) or an equivalent document for the Project, which will explain the steps EWR Co will take to reduce or mitigate disruption to local people, communities and the environment during

## **Matter Raised EWR Co Response** construction. Additionally, EWR Co will explain its approach to construction and operation of the railway and provide further details of potential effects of this during a phase of statutory consultation. Improved connectivity: serving larger number of residents / improved public transport; easier to access station; improved connectivity between population centres and for commuters; improved public transport for poorly served communities: EWR Co considered the accessibility of all potential station locations and their potential transport user benefits (design consideration assessment factor 1). Both proposed station options in Cambourne would be located close to existing communities. Although Cambourne North station is separated from Cambourne by the A428, a proposal to provide a new foot and cycle bridge over the A428 could help mitigate this potential impact to connectivity. In relation to the accessibility of station locations, one of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. EWR Co will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. A station closer to St Neots would also be more accessible by bicycle and public transport users, and would serve a larger existing population because these route alignments are closer to a larger number of existing properties overall. St. Neots stations also have slightly better connectivity to the proposed A428 Improvement Scheme as there would be a shorter access by road. However, EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. All station locations will require additional connections via public transport routes, and this was therefore not a

differentiating factor in the preferred route alignment decision. EWR Co will work

# **EWR Co Response Matter Raised** collaboratively with Cambridgeshire County Council, Huntingdonshire Council, the combined authority, and other public transport operators (predominantly bus) to provide connectivity to the station, including from communities where demand is not met by current provision. Further information will be provided at the statutory consultation. The objectives of EWR are to serve the whole of the Oxford to Cambridge area, and in that sense it is not designed specifically for local travel between particular communities besides those identified in the consultation materials. However, the assessment factors used to evaluate the performance of the route alignment options included consideration of short distance connectivity benefits (assessment factor 6, Short distance connectivity to support commuting travel into key employment hubs (current and future). When considering the benefits of the proposed railway from this point of view, it is not thought that any of the route alignments perform materially better. Therefore, this topic does not assist in differentiating between them. Development: aligned with existing and proposed development In designing options for the railway to date, EWR Co has been monitoring the progress of new and emerging development plans across the area in addition to proposals for new housing across the route. The potential impact of the scheme on existing housing - including housing that has been granted planning permission and is in the course of being built – was taken into account when considering detailed potential route alignments. EWR Co has also considered not only how the railway might interact with existing housing and current projects, but how it might best support future housing development by providing cost-effective, sustainable and accessible public transport options for new residents and settlements. It is important to note that the railway is intended to provide new connections for existing settlements, residents and businesses – not just future development. This built upon the preference for Route Option E and has formed a key part of our approach to selecting a preferred route alignment. Route Alignment 1 was considered a minor improvement for Contribution to enabling housing and economic growth (Assessment Factor 2) when compared to the Reference Case (Route Alignment 8). Station location better for development: EWR Co has taken into consideration a

number of factors when assessing the different station location options, including

## **EWR Co Response Matter Raised** potential housing delivery estimates for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 (Contribution to enabling housing and economic growth). Although EWR Co is still developing its analysis of each station option's potential for housing development, the evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South and so is more likely to be realised. There is more available land capable of development to the north of the A428 with fewer constraints such as heritage assets and areas of woodland. Housing development at Cambourne North is expected to be able to retain separation from and between existing settlements such as Papworth Everard, Knapwell and Elsworth, and a site in this area is already identified in the emerging Greater Cambridge Local Plan. Further information will be presented at the statutory consultation. Less noise, visual and light pollution: the option appraisal detailed in Appendix E of the NSC Technical Report included a variety of environmental assessment factors, including noise and vibration impacts and visual impacts (assessment factors 14.13 and 14.11 respectively). In terms of performance against these factors, Route Alignment 1 is considered a minor improvement to the Reference Case (Route Alignment 8). It is not possible to assess the impact of light pollution in detail at this stage because parts of the scheme that could have an effect on light pollution such as location and layout of stations, maintenance compounds and new access routes have not yet been finalised. However, EWR Co will seek to avoid putting the railway close to 'sensitive receptors' such as nearby residential areas or ecological habitats. EWR Co will continue to seek opportunities to reduce noise pollution, visual disturbance, and potential light pollution impacts through the design of the preferred route alignment. The PEIR will include assessments of and information regarding light pollution and disturbance, the noise environment and construction and operational noise limits, and visual and landscape impacts. The PEIR will be presented at statutory consultation, with a full Environmental

Statement being submitted as part of the DCO application. Construction-related impacts on the environment (such as light and noise pollution) will be identified and managed, as far as reasonably practicable, by a Code of Construction Practice

# **Matter Raised EWR Co Response** (CoCP) or an equivalent document submitted alongside the DCO application. Compliance with the CoCP or equivalent document will be secured through the requirements of the DCO itself. Less extensive construction required: the amount and length of engineering works for the railway were considered in assessment of the shortlisted route alignments, with Route Alignment 1 requiring a shorter total length of structures and fewer earthworks than the Reference Case represented by Route Alignment 8, having taken into account viaducts such as that at the proposed Black Cat Interchange near to Roxton. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Reduced risk of severance / splitting of communities: all route alignment options could have the potential to create some level of severance between communities and services, although measures are put in place to mitigate such severance at later design stages. Route Alignment 1 would pass within 500m of the fewest number of homes and avoids the need for demolitions in Bourn and Brickhill, reducing the potential of severance impacts to these communities. Provision will be made during construction to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. Arrangements for any diversions will involve discussion with appropriate parties at relevant stages with the aim of both mitigating disruption to the local community and enabling reasonable conditions for the progression of the works. The impact of any changes to access will be assessed in the environmental impact assessment process and reported as

Matter Raised	EWR Co Response
	part of the PEIR and Environmental Statement, with the aim of reducing adverse impacts of the scheme. Lower negative impact on wellbeing/mental health Environmental impacts – and potential resulting impacts on human health – will be considered throughout scheme development with the aim of reducing them where possible through the design. The impacts of the final route alignment on the health and wellbeing of local communities will then be assessed in a dedicated chapter of the PEIR published at statutory consultation, and then subsequently within the Environmental Statement, which will the detail the mitigation to be provided where appropriate.
A small number of respondents expressed concern for potential disruption to power and water supplies in the area.	It is inevitable that in constructing a project of this type, existing underground and overhead services (such as electricity, gas, water and communications) will need to be relocated. This work is usually, but not always, done in advance of the main construction works therefore is not a differentiating factor in the consideration of route alignments. EWR Co will engage with utility companies with the aim of minimising any disruption that may be associated with utility works. This will cover both existing utility supplies to local communities and extension of services to contractor worksites. Any necessary interruptions to services will involve engagement with relevant parties in advance to discuss appropriate mitigation. Designs for any utility diversions that may be required to deliver the Project will be discussed and agreed with the relevant utility companies. These designs will be set out at the statutory consultation where appropriate.
A small number of respondents were concerned that some of the maintenance costs associated with Alignment 9, such as cleaning graffiti, could fall onto local councils, and so on local people. Many respondents also remarked that the towns and villages around the route are too small to warrant additional rail services, and that the area is already well served by existing public transport, such as bus services. Furthermore, most of these respondents stated that they would experience no local benefit from this line.	Maintenance costs: precise Maintenance costs have not been calculated at this stage and therefore all route alignment options have been scored neutral (under assessment factor 5, Overall affordability). However, there is not expected to be a significant difference for maintenance costs between the route alignments and maintenance costs alone are therefore not considered a differentiating factor. Need for scheme, changes in demand, need for scheme not strong enough to outweigh negative impacts to villages, local benefits, Impact on developments in Caldecote The Case for EWR is detailed in Chapter 2 of the NSC Technical Report. EWR is part of the Government agenda to create a range of opportunities for people right across the area and help to spread prosperity across the UK, and Section D of the route is considered crucial in achieving this. EWR will provide increased connectivity to households and businesses across the route. When

#### **Matter Raised EWR Co Response** businesses become closer in effective proximity (e.g. you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. Furthermore, businesses will be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. With regard to the impact of Covid-19 and the reduced demand for rail travel, this is detailed in paragraph 2.2.4 of the NSC Technical Report. As EWR would not enter into service until the end of the decade, and the fact that the purpose of EWR is to enhance connectivity across the Oxford to Cambridge area as a whole. As noted in paragraph 2.2.4 of the NSC Technical Report, work is still ongoing to understand how the Covid-19 pandemic may affect commuter travel patterns over the long-term. Latest statistics released by the Department for Transport (DfT) show that national rail usage is currently around 80% of pre-covid levels (https://www.gov.uk/government/statistics/transportuse-during-the-coronavirus-covid-19-pandemic). All route alignments options could have the potential to create some level of severance between communities and services, although measures are put in place to mitigate such severance at later design stages. Provision will be made during construction to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. EWR Co has taken into account the impact that each route would have on committed developments, including those in Caldecote. Since the 2021 consultation the design has been amended to avoid having a direct impact on the Linden Homes development at All Angels Park. This is detailed in the Homes and Properties section above. Station location – demand for Tempsford St Neots has a larger population than Tempsford. This was considered by EWR Co in the assessment of station location options, as detailed in section 9.4 of the NSC Technical Report. Enabling housing growth and contributing to transformational growth within the Oxford to Cambridge area is a key part of EWR's purpose. As discussed in paragraph 9.6.47 of the Technical Report, Central Bedfordshire's draft local plan has identified much development potential around Tempsford as part of an

opportunity area, although no land has been allocated yet. A new station at a

#### **Matter Raised EWR Co Response** Tempsford location would provide a connection with the ECML and is expected to enable housing growth in the area. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Station location – Cambourne North v south, existing transport links (C2C busway) Lines on how C2C and A428 complement EWR. In assessing the station location options, accessibility, suitability and contribution to housing and economic growth were key considerations. The Cambourne North station is considered to provide better opportunities for future housing growth as there is more land available to the north of the A428. The existing connections, such as the A428, also mean that the station could be more easily accessed. All station locations will require additional connections via public transport routes, and this was therefore not a differentiating factor in the preferred route alignment decision. Running EWR parallel to the A428 would allow the scheme to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to places. This could also help to reduce some adverse impacts of the scheme. Visual changes to the landscape would be concentrated in the A428 corridor rather than in areas not already subject to development, and there may be the opportunity to combine landscaping and other environmental mitigation measures. EWR Co believes that it is important for the new railway to complement other local transport initiatives and infrastructure without duplicating them including the A428 and C2C busway. With respect to the C2C busway, EWR services at Cambourne would not duplicate this proposed new provision between Cambourne and Cambridge. The busway offers the opportunity for customers to access convenient services to north and west Cambridge which also serves villages in-between, while the preferred route alignment for EWR would provide quick,

direct links to the Cambridge South and Cambridge stations. In this respect, the new railway and the busway would be able to complement each other which

#### **EWR Co Response Matter Raised** many respondents told us was an important consideration. All alignments would in principle be able to provide connections to the road network, local bus services and C2C which means that it is not a differentiating factor in the route alignment decision. Concerns re. no demand for interchange station: as explained in paragraphs 9.4.10 - 9.4.11 of the Technical Report, provision has been assumed for a prospective station on the ECML with a passenger interchange with EWR. However, this is at an early development stage and EWR Co will assess whether the level of usage and consequential effects upon the ECML would justify an interchange station, using this information to inform future design development. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. A substantial number of respondents are entirely opposed to this route alignment EWR is part of the Government agenda to create a range of opportunities for people right across the Oxford to Cambridge area and help to spread prosperity option. Many of these respondents opposed any route alignment option which would travel near the village of Renhold, and many are opposed to all of the route across the UK, and Section D of the route is considered crucial in achieving this. alignment options. Many other respondents opposed any route which requires a The Case for EWR is detailed in Chapter 2 of the NSC Technical Report. Route Cambourne North station, such as Alignment 1 and Alignment 9, as they are Alignment 1 is a greater distance from Renhold than Route Alignment, 9. opposed to the northern approach into Cambridge. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Route Alignment 9 between Bedford and Tempsford station, EWR Co has developed Route Alignment 1 (Tempsford variant). Route Alignment 1 (Tempsford variant), is a variation of Route Alignment 1, which deviates from Route Alignment 1 south of Colesden, then runs north of Roxton and serves a Tempsford Station location. To the east of Tempsford station. Route Alignment 1 (Tempsford variant), would then follow the proposed route of Route Alignment 9, which merges with Route Alignment 1 east of Little Barford and then runs to a station north of Cambourne. Alignment 1 (Tempsford variant), would significantly reduce and/or mitigate the potential impacts at Ravensden,

#### **Matter Raised EWR Co Response** Renhold and Roxton associated with Alignment 9. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. A station at Cambourne South as opposed to Cambourne North: although route alignments which serve a Cambourne South station perform slightly better than those which serve a Cambourne North station in relation to transport user benefits, Cambourne North station performs better in relation to enabling housing and in particular the reduction of risks around delivery, which is significant. The NSC emerging preferred options Route Alignments 1 and 9, and Preferred Alignment 1 (Tempsford variant), would all serve a station at Cambourne North. Route Alignment 9 would utilise a southern approach to Cambridge rather than a northern approach. An alignment accessing Cambridge via the South was considered in selecting a preferred Route Option in 2020. In the 2021 consultation the appropriateness of this arrangement has been the subject of a question to consultees. A substantial number of respondents cited the stations at Tempsford and Lack of consultation: this consultation ran for ten weeks. Details about the Cambourne, as well as the subsequent southern approach to Cambridge, as concerns. Many respondents opposed the southern approach to Cambridge, consultation were available online throughout the period, and where we knew prefer a route alignment option for this section that enables the northern people were interested in a particular point, we provided further information in approach into Cambridge, which would require a station at Cambourne North. fact sheets via our website. To raise awareness of the consultation, we posted Several respondents claimed that Tempsford is too small to justify its own station, consultation information directly to 270,000 households, placed adverts in and that the growing town of St Neots would be better suited to a station. locations along the route, on local radio, on social media and in local print media. We also sent press releases to local media – including newspapers and radio stations – and our senior team conducted interviews with a range of outlets. At every step we were actively engaging with local residents and elected representatives, to ensure they had all the information they needed. There will be further opportunities to raise issues for consideration, including a statutory consultation. Following the statutory consultation, we will submit plans to the Government, and a panel of inspectors from the Planning Inspectorate will carry out a public examination of our application, which will also provide opportunity for comment.

# **Matter Raised EWR Co Response** Opposition to Cambourne North (inc. preference to Cambourne south due to local developments): although route alignments which serve a Cambourne South station perform slightly better than those which serve a Cambourne North station in relation to transport user benefits, Cambourne North station performs better in relation to enabling housing, as there is more suitable land available to the north of the A428 which has fewer constraints in comparison to the land around Cambourne South. The existing connections, such as the A428, also mean that the station could be more easily accessed. Cambourne North station also has reduced risks around delivery, which is significant. Impacts on communities: EWR Co has taken into consideration the potential impacts on existing communities and committed developments as mentioned by respondents. These impacts are detailed in the Homes and Properties section above. EWR Co also recognises there is the potential for development at Cambourne North to have a visual impact on historic buildings such as Childerly Hall, due to the relatively elevated location of developable land within the existing rural landscape, but EWR Co does not expect that to be a major constraint to development. Assessing the impact of the project on the environment is a fundamental part of the design of the scheme's development, including possible mitigations. This includes consideration of the setting and context of landscapes and historic views, and visual impacts. EWR Co is carefully considering how the development can be designed to blend in with the local environment. Where appropriate this will include mitigations measures such as landscape earthworks to soften the appearance of embankments and integrate them into the wider landscape context or using sensitive placement of appropriate planting to either screen views from sensitive receptors, or to soften the appearance and presence of engineering earthworks. Based on the designs presented at NSC, we do not anticipate directly impacting Croxton Park. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts and will continue to consider how we can best avoid impacts on the Croxton Park as we develop the design. Tempsford (A) station opposition: St Neots has a larger population than Tempsford. This was a considered by EWR Co in the assessment of station location

#### **Matter Raised EWR Co Response** options, as detailed in section 9.4 of the NSC Technical Report. In the 2021 consultation assessment St Neots stations perform slightly better than Tempsford station (as per Route Alignment 9). However, as discussed in paragraph 9.6.47 of the Technical Report, Central Bedfordshire's draft local plan has identified much development potential around Tempsford as part of an opportunity area, although no land has been allocated yet. EWR Co has considered the potential coalescence within the existing Tempsford area. While this is considered to be a risk at Tempsford (i.e., with Tempsford, Everton, Little Barford and Sandy), it is not considered as large as the risk as St Neots, as the Tempsford location is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Traffic and the potential for congestion around stations is expected to be the same for all station location options, and will be further examined at the next stage of design. When the final route alignment has been chosen, EWR Co will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. This will form part of the Environmental Statement that is submitted alongside the DCO application. EWR Co is seeking to maintain existing highway connections wherever feasible, including to Roxton. Where it is not feasible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. The proposed Tempsford station location for Route Alignment 9 (Tempsford Option A) would be located outside the identified flood zone. The Environment Agency plans to undertake flood modelling in this area of Tempsford alongside considering the modelled flood zone extents to ensure that they are accurate and up to date. EWR Co will continue engaging with the Environment Agency to support this work

# Matter Raised EWR Co Response where possible and use updated information to inform design of the route alignments. Opposition to any station at Cambourne: the decision to select a route option

A substantial number of respondents express concern about how Alignment 1 could impact communities and local people. Some respondents expressed concern about the proximity to villages and houses as well as the line cutting off access to services, in particular the villages of Wilden, Highfields Caldecote, Comberton and Toft. They commented that communities will need to cross the railway line to access the local GP surgery, dentist, sports facilities, butchers, public house and the library. A few respondents expressed concern that school-age children do not have access to a bus service to the local primary and secondary schools in Comberton, and they will have to cross the railway line in order to reach the schools. Many respondents commented on the perceived unequal level of impact compared to the benefit of Alignment 1 for small villages, stating that the alignment would have little or no transportation benefit to small rural communities whilst impacting the physical environment in the form of pollution and visual disruption from embankments and viaducts. These same respondents questioned the local need and use of the alignment. Respondents mentioned that the line would be too close to or divide the following communities: • Barrington. • Chawston. • Colmworth. • Colesdon. • Elsworth. • Eltisley. • the Eversdens. • Hardwick. • Harlton. • Harston. • Haslingfield. • Knapwell. • North Caldecote. • Renhold. • Ravensden. • Toseland. • Wilden. • Wintringham; and • Wyboston.

Many respondents voiced concern that the railway line and corresponding development would lead to a loss of identity in smaller villages and towns, due to further development potentially spurred by EWR. Respondents mentioned access to countryside, noise and air pollution, outdoor exercise, and the tranquillity and

and to link with existing public transport options. Impact to communities, health, wellbeing and quality of life Impacts to communities will occur to some extent for all route alignments (including alignments that might access Cambridge from the north), although in practice EWR Co aims to minimise these so far as possible. EWR Co has taken into account these impacts in the environmental appraisal detailed in Appendix E of the NSC Technical Report (assessment factor 14.4). In this regard, Route Alignments 1 and 9 represent a minor improvement to the Reference Case (Route Alignment 8), with other route alignment options assessed as neutral. The proximity of each proposed route alignment to residential properties and community facilities was assessed as part of the environmental appraisal (assessment factor 14.4), and the alignments have been designed to maintain a reasonable distance from existing communities where feasible. Route Alignments 1 and 9 represent a minor improvement to the Reference Case (Route Alignment 8) for this assessment factor, with other Route Alignment Options assessed as neutral. We will assess impacts to communities as part of the Environmental Statement alongside the DCO application which will consider the impact of the final Route Alignment on properties (including land take), which EWR Co will seek to mitigate where possible. Temporary construction-related environmental impacts on residential properties will be managed as far as reasonably practicable through measures which will be outlined in the Construction Code of Practice. All Route Alignments options could have the potential to create some level of severance between communities and services, although measures are put in place to mitigate such severance at later design stages. The potential impacts on Wilden, Highfields

Caldecote, Toft and other villages/communities have been taken into account in

serving Cambourne was taken in 2020 following the 2019 consultation. Route options serving Cambourne were considered to perform better in assessments, were ranked more highly by the public and were supported by EWR Co's local authority partners. This was because of the benefits not only of facilitating future housing growth, but also the ability to serve the existing settlement at Cambourne

#### **Matter Raised**

peacefulness of small villages. These respondents were concerned about impacts on mental and physical wellbeing for local people. Respondents also commented on potential mental and physical health impacts to local people, mentioning the impacts on tranquil village life and the visual disturbance of large structures. Several of these respondents suggested the alignment should be moved further away from villages to reduce the impact on local communities. Some respondents echoed this view, requesting that the alignment should be moved further away from small villages and into the surrounding open farmland, so that noise and pollution will be minimised for local people. A small number of respondents remarked on the potential negative impacts to local businesses. These included access routes to farms, potential critical infrastructure networks such as irrigation, and effects on local businesses due to reduced accessibility.

#### **EWR Co Response**

the overall assessment of community impacts. Provision will be made during construction to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. Importantly, children would not have to cross a railway line to reach schools in Comberton since pedestrian and road links would be maintained. Since consultation we have amended the design to run in cutting beneath the B1046 Comberton Road, between Comberton and Toft. This means with a minor realignment of the road a direct connection can be maintained between the two towns. Arrangements for any diversions will involve discussion with appropriate parties at relevant stages with the aim of both mitigating disruption to the local community and enabling reasonable conditions for the progression of the works. EWR Co is committed to ensuring so far as reasonably practicable that the Project is able to mitigate disruption during the planning, construction and operation of the scheme. The company will continue to consider the impact of planned work as the project progresses and work with affected communities and their representatives to ensure people impacted by the work are kept up to date with activity and progress. EWR Co is considering potential impacts on the community and how to reduce or mitigate disruption to local people, communities and the environment and how to avoid significant adverse impacts on health and quality of life. The company is considering a range of matters including sound, noise and vibration, air quality, as well as potential impacts on Public Rights of Way (PRoWs) and land and property requirements. The option appraisal detailed in Appendix E of the NSC Technical Report includes a variety of environmental assessment factors, including noise and vibration impacts, air quality, impacts to the community, visual impact, and agriculture and farmland. So far as relevant, this covers pollution. These were all taken into account in the assessment of route alignment options, and overall, Route Alignment 1 is considered a major improvement to the Reference Case (Route Alignment 8). EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g. you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. Furthermore, businesses will be able to attract an increased pool of labour due to

#### **EWR Co Response Matter Raised** the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. More information regarding the business case for EWR can be found in Chapter 2 of the Non-Statutory Consultation Technical Report. The objectives of EWR are to serve the whole of the Oxford to Cambridge area, and in that sense it is not designed specifically for local travel between particular communities besides those identified in the consultation materials. However, the assessment factors used to evaluate the performance of the route alignment options included consideration of short distance connectivity benefits (assessment factor 6, Short distance connectivity to support commuting travel into key employment hubs (current and future)). The proximity of each proposed route alignment to residential properties and community facilities was also assessed as part of the environmental appraisal (assessment factor 14.4, Community), and the alignments have been designed to maintain a reasonable distance from existing communities where feasible, including those highlighted by respondents. Route Alignments 1 and 9 represent a minor improvement to the Reference Case (Route Alignment 8) for this assessment factor, with other route alignment options assessed as neutral. The option appraisal, detailed in Appendix E of the NSC Technical Report, includes a variety of environmental assessment factors which can be considered to cover pollution, including noise and vibration impacts, air quality, impacts to the community, visual impact, and agriculture and farmland. These were all taken into account in the assessment of route alignment options, and overall Route Alignment 1 is considered a major improvement to the Reference Case (Route Alignment 8). Further information about the potential air quality, noise and visual impacts of Route Alignment 1 can be found in the 'Air, visual and noise pollution' row of this document. Route Alignment 1 offers the ability to concentrate impacts in the A428 corridor, rather than in areas not already subject to development. EWR Co will consider how the scheme can be designed to blend in with the local environment. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely adverse and beneficial environmental effects of the proposals. This process involves identifying potentially significant adverse impacts

resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts and

#### **Matter Raised EWR Co Response** likely beneficial effects. The PEIR will include information regarding the landscape and visual baseline, preliminary construction and operation assessment of impact on landscape character and views. Visual impacts of the final route alignment will then be assessed as part of the Environmental Statement, which will be developed with the input of stakeholders. This will enable suitable mitigation to be designed and included where appropriate when the scheme is constructed, such as landscape earthworks or sensitive placement of appropriate planting to soften the appearance of embankments. Regarding health and wellbeing of local people, the assessment factor 14.4 (Health) requires a greater level of detail about the scheme than is available at this stage. As such, this assessment factor has not been applied and the outcome is not considered to assist in differentiating between route alignment options. This is an assessment topic that will be the subject of detailed review in later phases of the Project's development. Environmental impacts – and potential resulting impacts on human health – will be considered throughout scheme development with the aim of avoiding and then reducing them where possible through the design. The impacts of the final route alignment on the health and wellbeing of local communities will then be assessed in a dedicated chapter of the PEIR published at the statutory consultation, and then subsequently within the Environmental Statement, which will detail the mitigation to be provided where appropriate. Inevitably, in selecting a preferred Route Alignment, EWR Co has to balance impacts and benefits, which is why a variety of Assessment Factors and considerations are used. Therefore, an alignment closer to settlements might affect less farmland and open countryside but be closer to and hence impact greater numbers of residents and communities. EWR Co considers that of all route alignments, Route Alignment 1 provides the most appropriate balance between these interests – and others. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. As the scheme develops, opportunities will be sought to reduce noise pollution, visual disturbance, and impacts on air quality through the design of the preferred route alignment. Assessments of the impact of the final route alignment on social and environmental factors such as air quality, noise, and visual disturbance will be undertaken for the Environmental

Statement. Appropriate mitigation will be identified and incorporated into the proposals, either as mitigation that is embedded within the design, or as

## **Matter Raised EWR Co Response** mitigation within the Code of Construction Practice or an equivalent document to manage temporary construction-related environmental impacts. EWR Co will consider impacts on communities and community assets as part of our assessments submitted within the Preliminary Environmental Information Report (PEIR) and Environmental Statement. The assessments will also consider the impact of the final route alignment on properties (including land take), which EWR Co will seek to mitigate where possible. Temporary construction-related environmental impacts on residential properties will be managed as far as reasonably practicable through measures which will be outlined in the Construction Code of Practice or an equivalent document. Severance and disruption to access all route alignment options could have the potential to create some level of severance between communities and services, although measures will be put in place to mitigate such severance at later design stages. Route Alignment 1 is expected to cross 69 Public Rights of Way (PRoW). All PRoW that would be crossed by the new railway are assumed either to be maintained in situ by a bridge or underpass or to be diverted. During construction, EWR Co will aim to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. Arrangements for any diversions will involve discussion with appropriate parties at relevant stages with the aim of both mitigating disruption to the local community and enabling reasonable conditions for the progression of the works. The impact of any changes to access will be assessed in the environmental impact assessment process and reported as part of the Preliminary Environment Information Report and Environmental Statement, with the aim of reducing adverse impacts of the scheme. In parallel, an Equality Impact Assessment will also be undertaken to capture potential impacts, both positive and negative, on protected characteristic groups (PCGs) as a result of the Project, and how these have been taken into account. Concern over increased developments around the station: stimulating economic growth, housing and employment across the Oxford to Cambridge area is a key Project objective. EWR Co considered potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E

## **EWR Co Response Matter Raised** of the NSC technical report. Cambourne North was found to provide a more suitable location for economic and housing growth than Cambourne South. This was a differentiating factor in the decision to choose Alignment 1 as one of the NSC emerging preferred options. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. The potential for coalescence of smaller villages along the route due to an increase in development was also considered. As stated in paragraph 9.6.28 of the Non-Statutory Consultation Technical Report, a station at Cambourne North, and the subsequent housing and economic development, is expected to be able to retain separation from and between existing settlements such as Papworth Everard, Knapwell and Elsworth. As described in paragraph 9.6.45 of the Non-Statutory Consultation Technical Report, new development around the site of the St Neots station options would risk coalescence with the existing St Neots built up area. Effects upon the identity of smaller villages and towns as a result of development is a matter for the assessment of those developments and not EWR. EWR Co has taken into account the impact to local communities of all sizes, including smaller villages and towns. All of the settlements identified have been considered by EWR Co, as well as any representations in respect of them. All route alignment options would have some impact on local communities, and of all shortlisted route alignment options, Alignment 1 would pass within 500m of the fewest number of homes. Effects upon the identity of smaller villages and towns as a result of development is a matter for the assessment of those developments and not EWR. Conflict / lack of alignment with other planned developments in the area EWR Co has taken into account effects on committed developments along each route alignment option (assessment factor 14.14, Planning). Although Route Alignments 1 and 9 would impact the development at Bourn Airfield, they would impact only the northeast corner of the development and it is anticipated that most of the development could be delivered unimpeded. All route alignments were considered neutral

when assessed against the reference alignment (Alignment 8) and as such, this

## **Matter Raised EWR Co Response** was not a differentiating factor. EWR Co is proactively monitoring third-party planning applications that have the ability to affect EWR. Where planned developments are identified as having potential to conflict with, or affect EWR, suitable representations will be made to the Local Planning Authority. In addition, EWR Co has also considered not only how the railway might interact with existing housing and current projects, but how it might best support future housing development by providing cost-effective, sustainable and accessible public transport options for new residents and settlements. Minimal benefits to residents EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g. you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. Furthermore, businesses will be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. More information regarding the business case for EWR can be found in Chapter 2 of the Non-Statutory Consultation Technical Report. Impact on traffic and bus routes: EWR Co will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. This assessment will include consideration of local and strategic roads including the A1 and A428. EWR Co will also prepare a Traffic Management Plan (TMP) that includes measures aimed at maintaining safety for road users and reducing the impacts of construction traffic. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR, which will

form elements to be considered at the statutory consultation, will include

# **Matter Raised EWR Co Response** information regarding the baseline for transport, access and non-motorised users, together with a preliminary assessment of impacts. This will be developed and refined for the Environmental Statement that is submitted alongside the DCO application. Security and anti-social behaviour issues: EWR Co acknowledges the importance of customers being and feeling safe while travelling and continues to design an environment where customers can travel confidently and safely. EWR stations will be designed and operated to industry standards including secure station accreditation. Multiple solutions creating a safe feeling when using stations are being explored including providing well-lit areas with good visibility, staffing at all stations, and all EWR trains and new stations being fitted with CCTV. EWR Co continues to consider all consultation responses as the customer proposition is developed for the railway. In developing the design of the permanent railway and temporary construction works, EWR Co will consider measures to avoid the potential for anti-social behaviour, such as maintaining clear sight lines will be maintained around hoardings and fencing with no hidden corners in order to avoid, where reasonably practicable. EWR has considered safety of the public and workers at all stages of design in accordance with recognised industry standards, and this will continue during construction and the route's operation and maintenance. The safety of workers, road users, non-motorised users (NMUs), supply chain and local people has been prioritised and considered so that risks are eliminated wherever possible. During construction, EWR will ensure that health, safety, and wellbeing performance meets and exceeds minimum legal requirements and industry best practise. Additional standards to maintain safety and security will also be set out in the Code of Construction Practice or an equivalent document. Impact on farmland and agricultural businesses: regarding the potential impact to local businesses, while assessment factor 14.15 (socio-economics) requires a greater level of detail about the scheme than is available at this stage, a socioeconomic impact assessment will be undertaken as part of the Environmental Impact Assessment for the final route alignment, which will be submitted with the Environmental Statement. This will consider disturbance, changes to access,

## **Matter Raised EWR Co Response** severance and land take on commercial businesses, development land and agricultural land, as well as employment generation during construction and operation of the scheme and the associated economic investment in the region. Assessment factor 14.1 looked at the potential adverse impacts on farm holdings, including the loss or severance of land and the disruption to farming practices (including drainage and irrigation). Route Alignment 1 is likely to impact a greater amount of farmland, but fewer holdings, and is therefore considered neutral when compared to the Reference Case (Route Alignment 8). EWR Co will seek to reduce or mitigate impacts of the scheme on farmland where possible during the design process and in discussion with affected landowners. During construction, EWR may impact agricultural land and access for farm vehicles. EWR Co will work closely with farmers and landowners and seek to reduce and mitigate potential such impacts, aiming to ensure that access to severed land for farmers and farm vehicles is maintained during construction. Utility diversions, protection and the relocation of farm irrigation infrastructure may be required but these works would be relatively short in duration. EWR Co will work with landowners whose farm water supply reservoirs and associated irrigation system is significantly impacted to ensure that a comparable supply is maintained during construction. Where we need to reach agreements with landowners, utilities operators or any other third parties, EWR Co will seek to do so through relevant legal agreements, protective provisions or within Statements of Common Ground. Regarding the potential impact to local businesses, while assessment factor 14.15 (socio-economics) requires a greater level of detail about the scheme than is available at this stage, a socio-economic impact assessment will be undertaken as part of the Environmental Impact Assessment for the final route alignment which will be submitted with the Environmental Statement. This will consider disturbance. changes to access, severance and land take on commercial businesses, development land and agricultural land, as well as employment generation during construction and operation of the scheme and the associated economic investment in the region. A substantial number of respondents expressed concern about negative impact on wildlife, particularly woodland mammals and birds. Particular areas of concern Habitats and biodiversity: EWR Co has taken into account any potential impacts on SSSIs and has identified which route alignment options would cross the Impact include Bourn Brook reserve and Green Sands Ridge. Most of these respondents Risk Zones (IRZ) of these protected areas. Route Alignment 8 would involve a large stated that this route has the potential to damage these wildlife habitats.

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Furthermore, these respondents stated that this route could lead to fragmentation of the hunting grounds and other travel corridors that these species need. Several respondents also stated that the loss of these species would have a negative impact on their experience in using this area for recreational walking.

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overlap with the IRZ of the Weaveley Woods and Sand Woods SSSI, risking an indirect impact to the interests of the site. However, Route Alignment 8 would have a relatively low impact on priority habitats compared to most of the other route alignment options, both in terms of the extent of the impact and the number of sites (nine). Route Alignment 1, an emerging preferred alignment at NSC, would have relatively higher impacts to mapped priority habitat areas, including at locations listed by respondents. However, it is considered that the impacts on priority habitats could be mitigated. Route Alignment 1 would also not overlap any SSSI IRZs and would have no indirect impact to ancient woodland sites. Route Alignment 1 is therefore considered a minor improvement with regard to ecology and biodiversity (assessment factor 14.5) in comparison to the Reference Case (Route Alignment 8). There is a colony of barbastelle bats in Eversden and Wimpole Woods Special Area of Conservation (SAC), located within the route option area and within 3-4km of the emerging route alignments between Bedford and Cambridge. EWR Co has carried out a number of surveys to better understand the barbastelle bat population in the area and plan to carry out further bat surveys as the design develops to ensure that the design does not significantly affect the population of barbastelle bats. These bat surveys will complement a wider programme of habitat surveys and species-specific surveys designed to help understand where species and habitats are in the landscape and how they are used, enabling the project to avoid, reduce, mitigate and if necessary, compensate for identified impacts throughout the design of the railway. EWR Co will develop a Preliminary Environment Information Report (PEIR) and Environmental Statement (ES) to describe the likely environmental effects of the proposals and report the results of survey work. Mitigation measures for protected species such as badgers and bats will be implemented in line with legal requirements and best practice as a minimum. Often this will involve the use of alternative habitat provision, physical barriers and may involve the relocation of species to an alternative location. EWR Co will also consider where to enhance or create wildlife corridors and green infrastructure such as green bridges where appropriate to help mitigate severance of habitats, maintain ecological connectivity and promote movement of wildlife. In relation to the concern that the proposed mitigation is not satisfactory, EWR Co understands the importance of biodiversity and protecting the habitats of local wildlife, including priority

## **Matter Raised EWR Co Response** habitats such as woodland and ancient woodland, as well as parks and green spaces. EWR Co is committed to protecting the environment by finding approaches to delivery that avoid, reduce, or mitigate negative environmental impacts. As part of this, the Project has committed to delivering biodiversity net gain along the Oxford to Cambridge area and will work with stakeholders to achieve this. Biodiversity net gain requires that habitats for wildlife are enhanced and left in a measurably better state than they were pre-development. EWR Co will therefore prioritise avoiding high value and priority habitats and where necessary enhance existing and create new habitats. This approach supports the Government's 25-year Environment Plan. Further information on plans for achieving biodiversity net gain will be provided during future phases of consultation. As the Project is developed, we will have regard to local environment policies, such as Biodiversity Action Plans or other local initiatives. Impacts to ancient woodland, woodland, mitigation Route Alignment 8 would potentially require the loss of two trees under Tree Preservation Order (TPO), and would come within 50m of 8 different ancient woodlands which is the highest number of ancient woodland sites out of the shortlisted route alignments. Route Alignment 1, an emerging preferred option at NSC, would not come within 50m of any ancient woodlands, and therefore presents an improvement on Route Alignment 8 in this case. Although Route Alignment 8 would pass close to Great and Little Early Grove, it would not pass through the woodland. None of the routes considered at consultation are expected to impact the Greensands Ridge walk. Route Alignment 8 would result in direct impacts to woodland at Brickhill Country Park and the River Great Ouse valley, which would affect the overall character of these places. Alignment 8 does not impact Bushy Common and Langlands plantations, near Abbotsley. Route Alignment 1 would avoid impacts at these places, but would result in woodland loss at All Angels Park and the trees lining Bourne Brook. EWR Co is following the environmental mitigation hierarchy by seeking to avoid significant adverse effects on woodland and ancient woodland and where this isn't possible, seeking to reduce and mitigate impacts and if necessary, looking at compensation. At this stage we are primarily focused on trying to avoid and minimise impact, by making decisions that help us 'design out'

the potential for environmental impacts. So, for example, as a result, all

alignments including this one (Route Alignment 8) have avoided direct impacts on

# **Matter Raised EWR Co Response** key national features including known ancient woodland. EWR Co is looking to ensure that landscape mitigation measures are closely integrated with the ecological requirements of both the Project and the wider area to ensure that the environmental legacy of the works is positive and to support EWR Co's commitment to Biodiversity Net Gain. Nature reserves: EWR Co will avoid direct impacts on the most significant nationally and internationally designated environmental assets including National Nature Reserves (NNRs). To the south of Cambourne, Route Alignment 8 would cross land on the edge of Cambourne nature reserve, which is in the vicinity of the proposed Cambourne south station location. EWR Co would seek to minimise the land take in this area, but mitigation would be required. Impacts to the Cambourne nature reserve to the south of Cambourne would be avoided with Route Alignment 1 or 9, the emerging preferred alignments at NSC, which serve a Cambourne North station location. Farmland: EWR Co has taken the impact on farmland into consideration when assessing the performance of the shortlisted route alignments (assessment factor 14.1). The Reference Case (Route Alignment 8) would likely impact approximately 50 farm holdings (based on available information), two of which would likely experience major adverse impact from the construction of the scheme. Route Alignment 1, an emerging preferred option at NSC, would impact fewer holdings (35) but require more agricultural land compared to Route Alignment 8, and is therefore considered neutral in comparison to Route Alignment 8. At each stage of design development, EWR Co is exploring ways to reduce the impact of the railway on agricultural practices and soil resources. EWR Co will continue to work with landowners and managers to gather information that will help inform the design process. During construction farm irrigation infrastructure may require protection or relocation, and EWR Co will work with landowners whose farm water supply reservoirs and associated irrigation system is significantly impacted to ensure that a comparable supply is maintained during the works. EWR Co will also seek to ensure that access to severed land for farmers and farm vehicles is maintained during construction.

### **EWR Co Response Matter Raised** Historic environment: as part of the environmental appraisal detailed in Appendix E of the NSC Technical Report, EWR took into account the impact on the Historic Environment (assessment factor 14.9), including impact to listed buildings, Scheduled Monuments and conservation areas. The appraisal found that Alignment 8 would have an adverse impact on the complex heritage resource area of the Bourn Valley and would come within 500 metres of ten conservation areas. including Bourn and Great Barford. This route alignment would run just south of Great Barford Hill conservation area and north east of Great Barford Green End conservation area. Tetworth Hall is over 2km south of Route Alignment 8, so it is not expected to be directly impacted by the scheme. EWR Co has taken into account potential impacts on SSSIs (Assessment Factor 14.5) and has identified which route alignment options would cross the Impact Risk Zones (IRZ) of these protected areas. Route Alignment 8 would involve a large overlap with the IRZ of the Weaveley Woods and Sand Woods SSSI, risking an indirect impact to the interests of the site. Route Alignment 8 would pass through the complex heritage area of the Bourn Valley, which would impact the setting of listed buildings and Scheduled Monuments and the Conservation Areas of Bourn, Caldecote and Kingston. However, Route Alignment 8 would have a relatively low impact on priority habitats compared to most of the other route alignment options, both in terms of the extent of the impact and the number of sites (nine). Tempsford Church End Conservation Area is one of the environmental and local heritage areas that has been identified in the vicinity of the proposed Tempsford station location site, which would require appropriate mitigations to protect. The NSC emerging preferred alignments, Route Alignments 1 and 9, demonstrated major improvements compared to the Reference Case (Alignment 8) for assessment factor 14.9 overall, and this was a differentiating factor in the identification of an emerging preference. A substantial number of respondents expressed concern about potential impacts Disruption to residents / villages / businesses, severance: due to the scale and on their local communities, particularly the villages of Renhold, Abbotsley and Ravensden. These respondents highlighted the rural nature of these villages as a nature of EWR, some impacts on communities are inevitable and all route key factor for their concern, stating that this route alignment option would add to alignment options would have some impact on local villages. EWR Co has taken growing urbanisation in the area. Several claimed that this route would add this into account in the assessment of route alignment options (assessment factor

barriers between interconnected villages, while passing through others, which

would have a negative impact on community cohesion. Several respondents raised

14.4). Alignment 8 would impact settlements, including Renhold and Abbotsley.

and would pass close to Ravensden. EWR Co considers that impacts on

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general concerns about potential impacts on the quality of life of local residents, stating that some may be distressed by their closer proximity to large transport links. Several others stated that there would be no local benefit for those affected by the route.

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communities could be reduced by routing EWR close to the existing travel corridor of the A428 (as is the case for Route Alignments 1, 2 and 9), as this would allow some adverse impacts to be concentrated in this corridor rather than in areas not already subject to development. Alignments 1 and 9 (the emerging preferred alignments at NSC) require the fewest demolitions (4 and 3 respectively) and Route Alignment 8 requires a higher number (8)). Alignment 1 would also affect a fewer number of residential properties regarding noise and vibration impacts (assessment factor 14.14). Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignments 8 and 9 between Bedford and Tempsford station, EWR Co has developed Alignment 1 (Tempsford variant). Alignment 1 (Tempsford variant), is a variation of Alignment 1, which deviates from Alignment 1 south of Colesden, then runs north of Roxton and serves a Tempsford Station location. To the east of Tempsford station, Alignment 1 (Tempsford variant), would then follow the proposed route of Alignment 9, which merges with Alignment 1 east of Little Barford and then runs to a station north of Cambourne. Alignment 1 (Tempsford variant), would significantly reduce and/or mitigate the potential impacts at Ravensden, Renhold and Roxton associated with Alignment 8, and Alignment 9. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. All route alignment options could have the potential to create some level of severance between communities and services, although measures will be put in place to mitigate such severance at later design stages. Route Alignment 8 is expected to cross 57 Public Rights of Way (PRoWs), while emerging preferred alignments at NSC Route Alignments 1 and 9 would cross 69 and 64 PRoW, respectively. All PRoWs that would be crossed by the new railway are assumed either to be maintained in situ by a bridge or underpass or to be diverted. All options have the potential to result in amenity or isolation impacts, particularly during construction, and every shortlisted route alignment is therefore considered neutral in comparison to the Reference Case. During construction, EWR Co will aim to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. Arrangements for any diversions will involve discussion with appropriate parties at relevant stages with the aim of both mitigating

## **Matter Raised EWR Co Response** disruption to the local community and enabling reasonable conditions for the progression of the works. The impact of any changes to access will be assessed in the environmental impact assessment process and reported as part of the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES), with the aim of reducing adverse impacts of the scheme. In parallel, an Equality Impact Assessment will also be undertaken to capture potential impacts, both positive and negative, on protected characteristic groups (PCGs) as a result of the Project, and how these have been taken into account. EWR Co will also prepare a Code of Construction Practice or an equivalent document for the Project, which will explain the steps that will be taken to manage construction activity in a way that reduces disruption to local people, communities and the environment as far as is reasonably practicable. EWR Co's approach to construction and operation of the railway, and further details of potential effects of this, will be provided during the statutory consultation. The potential for disruption to local amenity and wildlife is described in the Environmental section above. Urbanisation: EWR Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development. EWR Co has considered the potential coalescence within the existing St Neots area. This is also considered to be a risk at Tempsford (i.e. with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk as St Neots as the Tempsford location is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as

Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. With regards to future or further urban expansion

## **Matter Raised EWR Co Response** effects upon the identity of smaller villages and towns as a result of development is a matter for the assessment of those developments and not EWR. The provision of the railway is not itself predicted to have such an effect. Disruption to existing transport services EWR Co will prepare a Transport Assessment to consider the impact of the scheme on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. A Traffic Management Plan, prepared by EWR Co in consultation with relevant highway authorities and stakeholders, will also include measures aimed at maintaining safety for road users and reducing impacts of construction traffic, such as setting out the timing of traffic management measures. EWR Co is working closely with key stakeholders including Network Rail, National Highways and local councils to enable impacts on and interfaces with local infrastructure to be appropriately managed, and also opportunities explored. Benefits to residents and businesses EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g., you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. Furthermore, businesses will be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. Quality of life, health and wellbeing, noise, air, light and visual pollution: it is not expected that Route Alignment 8 would have a different (if any) effect upon physical or mental human health to any other route alignment. In developing our proposals, EWR Co has aimed to minimise the negative impact the scheme may have on communities and in particular people's homes, but inevitably with an infrastructure project of this size there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. Throughout the scheme

development, EWR Co will consider a range of matters including noise and

## **Matter Raised EWR Co Response** vibration, air quality, visual impact and light pollution, potential impacts on Public Rights of Way (PRoWs) and land and property requirements with the aim of avoiding and then reducing impacts. Through this process EWR Co would also aim to reduce and mitigate impacts which could potentially effect residents' health, wellbeing and mental health. In summary Route Alignment 8 would be predicted to have a number of potential impacts and performs worse in comparison to Route Alignment 1, an emerging preferred alignment at NSC, in relation to the following, which are described in more detail in other sections of this response table. • air quality (assessment factor 14.2) for residential properties in Roxton, Tempsford, Abbotsley, Caxton, Great Cambourne and Crow End. • noise and vibration impact at settlements, including Renhold and Abbotsley. • some very high visual impacts (assessment factor 14.11), particularly on residents of Renhold, Roxton and Crow End, with moderate impacts on other settlements including those south of Cambourne. The impacts of the final route alignment on the health and wellbeing of local communities will then be assessed in a dedicated chapter of the Preliminary Environmental Information Report (PEIR) published at the statutory consultation, and then subsequently within the Environmental Statement, which will detail the mitigation to be provided where appropriate. Freight and operating hours: While EWR Co is planning a passenger route, it has been asked by the Government to accommodate existing freight services that are already running through places such as Oxford, Bicester, the Marston Vale Line and Bedford and to make provision for potential future freight demand by proposing designs for the new infrastructure which do not preclude freight operations. EWR Co is working to understand what the potential capacity and demand would be on EWR for freight. These considerations did not materially affect the choices of route alignments. At this stage, it is not known how much freight would use the railway and when, as this is subject to government policy and market demand. However, mitigation measures for impacts such as noise and vibration that are being designed as part of the scheme would also factor in the potential operation of freight on EWR. Further information on the freight strategy for EWR, and EWR Co's approach to avoiding or reducing potential impacts from freight trains which may run on EWR, will be provided at the statutory consultation. In addition, as stated in section 3.10 of the NSC Technical Report, the

Matter Raised	EWR Co Response
	maximum gradient of the railway would be no steeper than 1 in 80 in order to allow most types of freight train to use the railway and reduce the risk of them running at slower speeds that could cause delays to passenger services. EWR Co proposed operational hours for passenger services in Appendices A and B of the 2021 Consultation Technical Report, which referred to a potential public facing timetables (planned trains in passenger services) to provide some initial guidance. There will also be less intensive train movements as required outside these hours for infrastructure maintenance, inspection, freight and other activities as part of the national rail network. We will continue to work on the concept of operation to inform the operational timetable
A substantial number of respondents expressed concern about potential negative impacts from this alignment on the surrounding environment, particularly Bourn Brook Valley and other conservation areas. Several respondents stated that this route would cause flooding in the area, as the alignment travels over the River Great Ouse flood plain. Many voiced concern about impacts on woodlands along the alignment, including the Great and Little Early Groves, Weavely Woods, and Sand Woods.	EWR Co has taken into account the potential impact that each shortlisted route alignment would have on surrounding environments. All Route Alignments, including Route Alignment 1, an emerging preference at NSC, represent major improvements compared to the Reference Case (Route Alignment 8) with regard to the overall score for Environment. Flooding Assessment factor 14.18 (Water Resources and Flooding) includes an assessment of impacts to flood plains. All route alignment options would cross areas of flood risk, and the assessment identified that Route Alignment 8 would have a relatively long crossing of the River Great Ouse flood plain, while also crossing an area of flood risk at Tempsford and a groundwater Source Protection Zone (SPZ) south of Cambourne. All route alignment options would include viaducts, and the surface water runoff would need to be accounted for in the detailed design. However, as detailed under assessment factor 14.3 (Climate), Alignment 8 would have the largest plan area of viaducts and bridges, so would have an increased amount of surface water run-off from these structures, compared to other alignments. Route Alignment 1 represents a major improvement compared to the Reference Case (Route Alignment 8) regarding water resources and flooding, and this was a differentiating factor in the decision to select Route Alignment 1 as an emerging preferred option at NSC. This is because Route Alignment 1 would have a shorter crossing of the River Great Ouse flood plain and routes via St Neots, therefore avoiding the area of flood risk near Tempsford. It would also avoid the groundwater SPZ south of Cambourne. Route Alignment 1 also has a smaller plan area of viaducts and bridges than the Reference Case, which would result in decreased surface water run-off compared to Route Alignment 8.

# **EWR Co Response Matter Raised** Air pollution EWR Co has considered the potential adverse impacts to air quality as part of the environmental appraisal of route alignments (assessment factor 14.2). While it would not be likely to impact any AQMAs, Route Alignment 8 would be likely to impact residential properties in Roxton, Tempsford, Abbotsley, Caxton, Great Cambourne and Crow End. Route Alignment 1 is considered to be a major improvement in relation to air quality compared to Route Alignment 8, as overall there would be significantly fewer properties impacted and a lower volume of earthworks required. This was a differentiating factor in the decision to select Route Alignment 1 as an emerging preferred option at NSC. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals, including likely air quality-related risks from construction activities and potential air quality impacts from operation. Identification of mitigation and control measures will also be presented as part of the PEIR, which will be presented at the statutory consultation. A full environmental statement will then be submitted as part of the development consent order application and will assess changes in Nitrogen Oxides (NOx) and fine particulates (known as PM2.5 and PM10) and dust. This assessment will follow best practice and guidance such as the guidance set by the Institute of Air Quality Management and other recognised bodies. Historic environment / heritage assets and conservation areas: as part of the environmental appraisal detailed in Appendix E of the NSC Technical Report, EWR took into account the impact on the Historic Environment (assessment factor 14.9), including impact to listed buildings, Scheduled Monuments and conservation areas. The appraisal found that Alignment 8 would have an adverse impact on the complex heritage resource area of the Bourn Valley, and would come within 500 metres of ten conservation areas, including Bourn and Great Barford. This route alignment would run just south of Great Barford Hill conservation area, north east of Great Barford Green End conservation area and north of Great Barford conservation area. Based on the designs presents at NSC, we do not anticipate direct impacts on Tetworth Hall, which is over 2km south of Route Alignment 8. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental

## **Matter Raised EWR Co Response** impacts and will continue to consider how we can best avoid or mitigate impacts on heritage assets, conservation areas and sensitive environmental features as we develop the design. Tempsford Church End Conservation Area is one of the environmental and local heritage areas that has been identified in the vicinity of the proposed Tempsford station location site, which would require appropriate mitigations to protect. Route Alignment 1 demonstrated a major improvement compared to the Reference Case (Alignment 8) for assessment factor 14.9 overall, and this was a differentiating factor in the identification of the emerging preferences at NSC. Nature reserves EWR Co will avoid direct impacts on the most significant nationally and internationally designated environmental assets including National Nature Reserves (NNRs). To the south of Cambourne, Route Alignment 8 would cross land on the edge of Cambourne nature reserve, which is in the vicinity of the proposed Cambourne south station location. EWR Co would seek to minimise the land take in this area, but mitigation would be required. Impacts to the Cambourne nature reserve to the south of Cambourne would be avoided with Route Alignments 1 or 9, the emerging preferred options at NSC, which serve a Cambourne North station location. EWR Co is aware of conservation. initiatives, such as the Ox-Cam Arc Environmental Pillars and local authority Biodiversity Action Plans. EWR Co recognises the importance of biodiversity and protecting the habitats of local wildlife including priority habitats such as woodland and ancient woodland as well as parks and greenspaces. As part of EWR Co's commitment to changing the environment for the better, the company will continue to consider such initiatives and local policy and is thinking carefully about protected species and their habitats when designing the railway. Farmland: EWR Co has taken the impact on farmland into consideration when assessing the performance of the shortlisted route alignments (assessment factor 14.1). The Reference Case (Route Alignment 8) would likely impact approximately 50 farm holdings (based on available information), two of which would likely experience major adverse impact from the construction of the scheme. Route Alignment 1, an emerging preferred option at NSC, would impact fewer holdings

(35) but require more agricultural land compared to Route Alignment 8, and is therefore considered neutral in comparison. At each stage of design development, EWR Co is exploring ways to reduce the impact of the railway on agricultural

## **Matter Raised EWR Co Response** practices and soil resources. EWR Co will continue to work with landowners and managers to gather information that will help inform the design process. EWR will make further information on the development of design available at the statutory consultation. During construction farm irrigation infrastructure may require protection or relocation, and EWR Co will work with landowners whose farm water supply reservoirs and associated irrigation system is significantly impacted to ensure that a comparable supply is maintained during the works. EWR Co will also seek to ensure that access to severed land for farmers and farm vehicles is maintained during construction. Ancient woodland, woodland, mitigation Route Alignment 8 would potentially require the loss of two trees under Tree Preservation Order (TPO) and would come within 50m of 8 different ancient woodlands which is the highest number of ancient woodland sites out of the shortlisted route alignments. Route Alignment 1, an emerging preferred option at NSC, would not come within 50m of any ancient woodlands, and therefore presents an improvement on Route Alignment 8 in this case. Route Alignment 8 would result in direct impacts to woodland at Brickhill Country Park and the River Great Ouse valley, which would affect the overall character of these places. Although Route Alignment 8 would pass close to Great and Little Early Grove, it would not pass through the woodland. Similarly, it would not directly impact Bushy Common or Langlands plantations, near Abbotsley. Route Alignment 1 performed better in relation to Ecology and Biodiversity than Route Alignment 8 and would avoid impacts at these places, but would result in woodland loss at All Angels Park and the trees lining Bourne Brook. EWR Co is following the environmental mitigation hierarchy by seeking to avoid significant adverse effects on woodland and ancient woodland and where this isn't possible, seeking to reduce and mitigate impacts and if necessary, looking at compensation. At this stage EWR Co is primarily focused on trying to avoid and minimise impact, by making decisions that help us 'design out' the potential for environmental impacts. So, for example, as a result, all alignments including this one (Route Alignment 8) have avoided direct impacts on key national features including known ancient woodland. EWR Co is looking to ensure that landscape mitigation measures are closely integrated with the ecological requirements of both the

Project and the wider area to ensure that the environmental legacy of the works is positive and to support EWR Co's commitment to Biodiversity Net Gain. Further

## **Matter Raised EWR Co Response** information on potential impacts on Great and Little Early Groves, Bushey Common, Weaveley Woods and Sand Woods will be available at the statutory consultation, along with the PEIR and Environmental Statement. Landscape / Visual impacts, light pollution, embankments: when looking at landscape and visual impacts, Route Alignment 8 would have relatively high impacts upon landscape character due to the direct impact upon woodland and overall character and Brickhill Country Park, the River Great Ouse valley and indirect impacts upon the character of Roxton Park. Route Alignment 8 would also result in some significant visual impacts, including upon residents in Renhold, Roxton and Crow End. Some settlements including those to the south of Cambourne, Caxton, Caldecote, Great Cambourne, Lower Cambourne and Kingston would experience moderate visual impacts. Route Alignment 1, an emerging preferred option at NSC, would present a minor improvement to this. In developing our proposals, EWR Co has aimed to reduce the negative impact the project may have on communities and in particular people's homes, but inevitably with an infrastructure project of this size there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. EWR Co is carefully considering how the development can be designed to blend in with the local environment. This includes the consideration of where to create embankments and where viaducts are potentially required. Further examples of where visual impacts are being considered are the use of landscape earthworks to soften the appearance of embankments and integrate them into the wider landscape context or using sensitive placement of appropriate planting to either screen views from sensitive receptors or soften the appearance and presence of engineering earthworks. More information about mitigation will be shared at the statutory consultation. EWR Co will develop an understanding of the existing landscape character areas, including countryside, and visual resources and how they are valued by stakeholders. This understanding will be used to inform the design where practicable, the landscape design will respond and reflect those features which make up the landscape character. The potential effects of light pollution from the railway will be considered as EWR Co develops designs for the Project.

This will include considering the location and layout of lighting in stations,

## **Matter Raised EWR Co Response** maintenance compounds and new access routes. Through the design EWR Co will seek to avoid impacts on 'sensitive receptors', such as nearby residential areas or ecological habitats. The Code of Construction Practice (CoCP) or an equivalent document will also outline provisions aimed at reducing and mitigating temporary construction-related environmental impacts and disruption to local communities. Habitats and biodiversity: EWR Co has taken into account any potential impacts on SSSIs and have identified which route alignment options would cross the Impact Risk Zones (IRZ) of these protected areas. Route Alignment 8 would involve a large overlap with the IRZ of the Weaveley Woods and Sand Woods SSSI, risking an indirect impact to the interests of the site. However, Route Alignment 8 would have a relatively low impact on priority habitats compared to most of the other route alignment options, both in terms of the extent of the impact and the number of sites (nine). Route Alignment 1, an emerging preferred option at NSC, would have relatively higher impacts to mapped priority habitat areas, including at locations listed by respondents. However, it is considered that the impacts on priority habitats could be mitigated. Route Alignment 1 would also not overlap any SSSI IRZs and would have no indirect impact to ancient woodland sites. Route Alignment 1 is therefore considered a minor improvement with regard to ecology and biodiversity (assessment factor 14.5) in comparison to the Reference Case (Route Alignment 8). There is a colony of barbastelle bats in Eversden and Wimpole Woods Special Area of Conservation (SAC) located within the route option area and within 3-4km of the emerging route alignments between Bedford and Cambridge. EWR Co has carried out a number of surveys to better understand the barbastelle bat population in the area and plan to carry out further bat surveys as the design develops to ensure that the design does not significantly affect the population of barbastelle bats. These bat surveys will complement a wider programme of habitat surveys and species-specific surveys designed to help understand where species and habitats are in the landscape and how they are used, enabling the Project to avoid, reduce, mitigate and if necessary, compensate for identified impacts throughout the design of the railway. EWR Co will develop a Preliminary Environment Information Report (PEIR) and Environmental Statement (ES) to describe the likely environmental effects of the proposals and report the results of survey work. Mitigation measures for protected species such as badgers

#### **Matter Raised EWR Co Response** and bats will be implemented in line with legal requirements and best practice as a minimum. Often this will involve the use of alternative habitat provision, physical barriers and may involve the relocation of species to an alternative location. EWR Co will also consider where to enhance or create wildlife corridors and green infrastructure such as green bridges where appropriate to help mitigate severance of habitats, maintain ecological connectivity and promote movement of wildlife. In relation to the concern that the proposed mitigation is not satisfactory, EWR Co understands the importance of biodiversity and protecting the habitats of local wildlife, including priority habitats such as woodland and ancient woodland, as well as parks and green spaces. EWR Co is committed to protecting the environment by finding approaches to delivery that avoid, reduce, or mitigate negative environmental impacts. As part of this, the Project has committed to delivering biodiversity net gain along the Oxford to Cambridge area and will work with stakeholders to achieve this. Biodiversity net gain requires that habitats for wildlife are enhanced and left in a measurably better state than they were predevelopment. EWR Co will therefore prioritise avoiding high value and priority habitats and where necessary enhance existing and create new habitats. This approach supports the Government's 25-year Environment Plan. Further information on plans for achieving biodiversity net gain will be provided during future phases of consultation. As the Project is developed, we will have regard to local environment policies, such as Biodiversity Action Plans or other local initiatives. A substantial number of respondents expressed concern about potential negative impacts of Section D on local communities, specifically Brickhill, Wilden and Disruption to residents/villages/businesses: EWR Co will continue to consider the Clapham, which would all be potentially affected regardless of route alignment. impact of planned work as the Project progresses and work with affected These respondents claim that this section of the line would divide communities communities and their representatives to ensure people impacted by the work are kept up to date with our activity. Throughout design development, EWR Co will who rely on interconnectivity for access to amenities, and could contribute to growing urbanisation, which they believe would diminish their rural way of life. continue to seek opportunities to eliminate, reduce or mitigate disruption to local Furthermore, many respondents claimed that this section would provide no people, communities, and the environment in addition to considering how

benefit to the residents of the areas affected, largely as a result of the lack of

proposed stations along the route. Several respondents also claimed that this

section would negatively impact on the mental health of local residents.

significant adverse impacts on health and quality of life can be avoided. As part of

this work, EWR Co is considering a range of aspects including sound, noise and

vibration, air quality, as well as Public Rights of Way (PRoWs) and land and property requirements. It is also important that EWR is built not just in the right place, but in the right way too. EWR Co will prepare a Code of Construction

## **EWR Co Response Matter Raised** Practice for the Project, which will explain the steps that will be taken manage construction activity in a way that reduces disruption to local people, communities and the environment as far as is reasonably practicable. EWR Co's approach to construction and operation of the railway, and further details of potential effects of this, will be provided during the statutory consultation. EWR will provide increased connectivity to households and businesses across the route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. All routes were assessed for Community consideration (assessment factor 14.4), which consideration of properties, community and recreational facilities affected and clashes with public rights of way and open spaces. For this consideration Route Alignment 1, an emerging preferred alignment at NSC, was considered as a minor Improvement. Impacts on health and wellbeing: regarding health and wellbeing of local people, the assessment factor 14.8 (Health) requires a greater level of detail about the scheme than is available at this stage. This assessment factor has therefore not yet been applied and the outcome is not considered to assist in differentiating between route alignment options. This is an assessment topic that will be the subject of detailed review in later phases of the Project's development. However, throughout the design process EWR Co will seek to reduce and/or plan to mitigate adverse effects of the scheme which could impact on quality of life and health and wellbeing, such as noise and air pollution and visual intrusion. When the final route alignment has been chosen, impacts on the health and wellbeing of local communities will then be assessed in a dedicated chapter of the Preliminary Environmental Information Report (PEIR) published at the statutory consultation, and then subsequently within the Environmental Statement to be submitted with the DCO application, which will detail the mitigation to be provided where appropriate. This PEIR will describe the likely adverse and beneficial environmental effects of the proposals. This process involves identifying

potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts and likely beneficial effects. The PEIR will include information regarding baseline soils environment, including presence of best and

## **Matter Raised EWR Co Response** most versatile (BMV) land, and existing agricultural and forestry land use and agricultural land holdings. The potential impacts and likely effects on the baseline soils environment arising from disturbance and displacement and mitigation such as outline plans for soil management during construction will be presented as part of the PEIR and will be presented at the statutory consultation. Potential impacts and likely effects on agricultural and forestry land use and agricultural land holdings arising from land-take, demolitions of key agricultural infrastructure, severance and changes in accessibility will be presented as part of the PEIR and will be presented at the statutory consultation. A full environmental statement will then be submitted as part of the development consent order application. For information about the impact to wildlife and farming, consult the row above. 1:80 gradient and Embankment heights. The maximum gradient of the railway would be no steeper than one in 80 to allow most types of freight train to use the railway without significant risk of operating at such slow speeds that passenger trains might be delayed. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Freight line and operating hours EWR Co is working to understand what the potential capacity and demand would be on EWR for freight. These considerations did not materially affect the choices of route alignments. At this stage, it is not known how much freight would use the railway and when, as this is subject to government policy and market demand. However, as stated in section 3.10 of the NSC Technical Report, the maximum gradient of the railway would be no steeper than one in 80 in order to allow most types of freight train to use the railway and reduce the risk of them running at slower speeds that could cause delays to passenger services.

Mitigation measures for impacts such as noise and vibration that are being

# **Matter Raised EWR Co Response** designed as part of the scheme would also factor in the potential operation of freight on EWR. Further information on the freight strategy for EWR, and EWR Co's approach to avoiding or reducing potential impacts from freight trains which may run on EWR, will be provided at the statutory consultation. EWR Co proposed operational hours for passenger services in Appendices A and B of the 2021 Consultation Technical Report, which referred to a potential public facing timetables (planned trains in passenger services) to provide some initial guidance. There will also be less intensive train movements as required outside these hours for infrastructure maintenance, inspection, freight and other activities as part of the national rail network. We will continue to work on the concept of operation to inform the operational timetable. Noise, light, air and visual pollution: the option appraisal detailed in Appendix E of the NSC Technical Report included a variety of environmental assessment factors, including noise and vibration impacts, air quality, and visual impacts (assessment factors 14.13, 14.2 and 14.11 respectively). In terms of performance against these factors, Route Alignment 1 (an emerging preferred alignment at NSC) is considered a major improvement to the Reference Case (Route Alignment 8). It is not possible to assess the impact of light pollution in detail at this stage because parts of the scheme that could have an effect on light pollution such as location and layout of stations, maintenance compounds and new access routes have not vet been finalised. However, EWR Co will seek to avoid putting the railway close to 'sensitive receptors' such as housing. EWR Co will continue to seek opportunities to reduce noise pollution, visual disturbance, and impacts on air quality through the design of the preferred Route Alignment, Route Alignment 1 (Tempsford variant). Assessments of the impact of the final route alignment on these factors, including light pollution, will be undertaken for the Environmental Statement. Appropriate mitigation will be identified and incorporated into the proposals, either as mitigation that is embedded within the design, or as mitigation within the Code of Construction Practice or an equivalent document to manage temporary construction-related environmental impacts. Security, safety and anti-social behaviour: EWR has considered safety and security

of the public and workers at all stages of design in accordance with recognised

## **Matter Raised EWR Co Response** industry standards, and this will continue during construction and the route's operation and maintenance. The safety and security of workers, road users, nonmotorised users (NMUs), supply chain and local people has been prioritised and considered so that risks are eliminated wherever possible. During construction, EWR will ensure that health, safety, security and wellbeing performance meets and exceeds minimum legal requirements and industry best practise. Additional standards to maintain safety and security will also be set out in the Code of Construction Practice or equivalent document. In terms of safety and security (in the context of potential increased anti-social behaviour), EWR Co is committed to developing, designing and constructing the railway such that safety and security risks are as low as possible. Page 7 of the Sponsor's Requirements contains some key principles that the Project will comply with this in this respect (e.g., aligning with the DfT's 'Security in the Design of Stations (SIDOS) best practice design guidance). Alignments were assessed against Assessment Factor 13 Safety risk which is defined as the risk (likelihood and consequence) of harm to workforce and public during construction, operations and maintenance. Route Alignment 1, an emerging preferred alignment at NSC, was considered to be a minor Improvement for Safety Risk in construction and in operations and maintenance. Urbanization, concerns that a Cambourne North station will open up farmland for development, over population at Cambourne and local infrastructure: EWR Co has considered the amount and location of stations along the route, including additional stations along this section of the route would create longer journey times and may mean that the Project would not meet its key objectives. One of the key objectives of EWR is to enable sustainable housing and economic growth. The proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, as well as helping to ease some of the upwards pressure on the housing market. EWR Co has considered the accessibility to suitable road infrastructure, potential demand and viability of development in choosing station locations. EWR Co has also taken into account the accessibility of all potential station locations. Both proposed station options in Cambourne would be located close to existing communities.

Cambourne North station is separated from Cambourne by the A428 which may slightly reduce connectivity to the existing settlement, compared to Cambourne

## **Matter Raised EWR Co Response** South, particularly for active travel options such as walking, wheeling and cycling. However, it is believed that this could be mitigated by a foot and cycle bridge over the A428. The development of first mile/last mile strategies will also be considered for the preferred alignment to mitigate such matters. This was therefore not considered to be a differentiating factor. EWR Co has considered the potential for coalescence of smaller villages along the route, due to an increase in development. As stated in paragraph 9.6.28 of the NSC Technical Report, a station at Cambourne North, and the subsequent housing and economic development, is expected to be able to retain separation from and between existing settlements. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. EWR Co will prepare a Transport Assessment as part of the Environmental Statement to consider the impact of the scheme on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. A Traffic Management Plan, prepared in consultation with relevant highway authorities and stakeholders, would include measures aimed at maintaining safety for road users and reducing impacts of construction traffic, such as setting out the timing of traffic management measures. Comparable options connecting to a station north of Cambourne have a shorter length of structures than those connecting to a station south of Cambourne, which helps to reduce their cost, potential visual impacts and embodies carbon. Benefits to residents and businesses EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g., you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. Furthermore, businesses will be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey

times to areas along EWR and workers will be better connected to additional job opportunities along the route. Alignment with developments and residents One of the key objectives of EWR is to enable sustainable housing and economic growth.

# Matter RaisedEWR Co ResponseThe proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, as well as helping to ease some of the upwards pressure on the housing market. EWR Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development.A substantial number of respondents expressed concern about properties along Route Alignment 9. Many mentioned that houses in the area tend to be older,Impacts on committed developments. The design aims to reduce and mitigate the impacts on the developments at Bourn Airfield and Highfields Caldecote. Route

A substantial number of respondents expressed concern about properties along Route Alignment 9. Many mentioned that houses in the area tend to be older, with many using wattle and daub construction, and so may be more impacted by land shifting from construction and rail use, as well as by vibrations from the trains themselves. Many others expressed concern about the potential demolition of houses to construct the route. These respondents believe demolition is unnecessary and should be minimised wherever possible. Several respondents expressed concern that this route alignment option would affect the delivery of new housing developments. Furthermore, several respondents voiced concerns that Route Alignment 9 could contribute to growing urbanisation, potentially causing their villages to be subsumed into larger developments. Many respondents remarked that the construction of this route, and subsequent effects on the surrounding area, would negatively affect the values of their properties.

Alignments 1 and 9 (the emerging preferred options at NSC) would only impact the north-eastern corner of the proposed Bourn Airfield development and it is considered most of the development could be delivered unimpeded. Since the 2021 consultation the design has been amended to avoid having a direct impact on the Linden Homes development at All Angels Park. Any additional mitigation required will be considered in later phases of project development. Regarding concern about the equestrian centre at Oldways Road it is noted that although Alignment 9 required equestrian central land it did not require the demolition of buildings. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignment 9 between Bedford and Tempsford station, EWR Co has developed Alignment 1 (Tempsford variant). Alignment 1 (Tempsford variant) is a variation of Alignment 1, which deviates from Alignment 1 south of Colesden, then runs north of Roxton and serves a Tempsford station location. To the east of Tempsford station, Alignment 1 (Tempsford variant), would then follow the proposed route of Alignment 9, which merges with Alignment 1 east of Little Barford and then runs to a station north of Cambourne. Alignment 1 (Tempsford variant), would significantly reduce and/or mitigate the potential impacts at Ravensden, Renhold and Roxton associated with Alignment 9. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant) as part of the statutory consultation.

## **EWR Co Response Matter Raised** Impact on farming and agricultural buildings: based on the length of Route Alignment 9, it would require more agricultural land compared to the Reference Case, and is likely to impact approximately 39 farm holdings (based on available information). One of these 39 farm holdings would be likely to experience a major adverse impact from the construction of the Project. At each stage of design development, EWR Co is exploring ways to reduce the impact of the railway on agricultural practices and soil resources. EWR Co will continue to work with landowners and managers to gather information that will help inform the design process. During construction farm irrigation infrastructure may require protection or relocation, and EWR Co will work with landowners whose farm water supply reservoirs and associated irrigation system is significantly impacted to ensure that a comparable supply is maintained during the works. EWR Co will also seek to ensure that access to severed land for farmers and farm vehicles is maintained during construction. Concerns around demolition and devaluation of property: EWR Co, working within constraints such as Sites of Special Scientific Interest and heritage assets, has sought to design the alignments in a way that reduces the negative impacts they may have on people's homes and land but, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be impacted. As detailed in the Consultation Technical Report Appendix E – Project Section D Assessment Factor Tables (East West Rail, 2021), Route Alignment 9 is likely to require the demolition of three properties, which is fewer than the Reference Case (Route Alignment 8). Therefore, Route Alignment 9 is judged to have a minor improvement compared to the Reference Case regarding residential demolitions. Similarly, Alignment 1 (an emerging preferred alignment at NSC) represents a minor improvement, requiring the demolition of four properties. As such, both Route Alignments perform well in comparison to the others. Where land is acquired or proposed to be acquired, the Compensation Code sets out the circumstances in which compensation is payable, EWR Co provided a guide to compulsory purchase compensation Guide to

Compulsory Acquisition and Compensation. Compensation is also available for properties in proximity to the new railway which may be affected by various

# **Matter Raised EWR Co Response** physical factors of the operation of the railway once it is in use, this is referred to as Part 1 compensation for which we included a guide on the website – Guide to Part 1 claims Also, EWR Co will be introducing a Proposed Need to Sell Property Scheme at Preferred Route Announcement to assist people with a pressing need to sell but unable due to the Project. EWR Co consulted on a Proposed Need to Sell Property Scheme at the same time as the main non-statutory consultation and the details for the Guide to the Proposed Need to Sell Property Scheme are available on our website. Loss of character; urbanisation: EWR Co has considered the potential coalescence within the existing St Neots area. This is also considered to be a risk at Tempsford (i.e., with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk as St Neots as the Tempsford location is further away from the existing settlements. Effects upon the identity of smaller villages and towns as a result of development is a matter for the assessment of those developments and not FWR. Concerns regarding vibration impact on properties: the number of communities which, despite mitigation, may still potentially experience likely significant noise and vibration effects would be one (northern end of Caldecote). The Reference Case (Route Alignment 8) would potentially impact one too, but this would be homes on Broadway, north of Bourne. All route alignment options would potentially affect one community within this indicator, so this is not a differentiating factor. The impact of vibration from construction activity and operation of the railway on the type of buildings mentioned by respondents (those built using wattle and daub construction) has not been specifically assessed at this stage. EWR Co will take this into account for future assessments, should these properties be in the assessment corridor. As set out in paragraph 4.3.26 of the Consultation Technical Report, EWR Co will seek ways to construct the works that minimise impacts including vibration but inevitably some activities, such as piling (the construction of deep foundations for structures), will be necessary. In such instances, EWR Co will ensure that working hours are limited and that where properties are likely to be affected, surveys will be carried out to assess and

manage the risk to homeowners. Throughout the scheme development, EWR Co

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	will consider a range of matters including noise and vibration, and property
	requirements with the aim of avoiding and then reducing impacts. Through this
	process EWR Co would also aim to reduce and mitigate impacts which could
	potentially effect residents' health, wellbeing and mental health.
	Cambourne North not suitable for housing development: overall, it is considered that the amount of new housing provided at Cambourne South would be less than at Cambourne North, and that there are fewer planning and development constraints at Cambourne North, including consolidated land ownerships (paragraph 9.6.31). Considering each route alignment's contribution to enabling housing, those with a Cambourne North station performs better in particular the reduction of risks around delivery, which is significant. The emerging preferred alignments at NSC, Route Alignments 1 and 9 both therefore are a minor improvement on the reference case (Route Alignment 8) for this consideration. In this way, Route Alignment 9 performs better than the reference case. Tempsford population not big enough to justify new station. Enabling housing growth and contributing to transformational growth within the Oxford to Cambridge area is a key part of EWR's purpose. A new station at Tempsford would provide a connection with the ECML and is expected to enable housing growth in the area. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), and would serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other
	stakeholders will be able to provide feedback on the updated route design for
A substantial combandant company	Alignment 1 (Tempsford variant), as part of the statutory consultation.
A substantial number of respondents expressed concern about the impact of	EWR Co has taken into account potential noise and vibration impacts and impacts
Alignment 8 on noise in the area. These respondents stated that the rural nature	on the historic environment of each route alignment option in the environmental
of this area means that people move there to avoid noise, and this would be	appraisal detailed in Appendix E of the NSC Technical Report. As part of the
impacted by the presence of a railway. Furthermore, these respondents state that	environmental assessments detailed in Appendix E of the NSC Technical Report,
many residents are not used to the presence of rail noise, and so will be more	EWR Co considered the impact on the Historic Environment (assessment factor
acutely impacted by these proposals. Similarly, several respondents voiced	14.9). This included potential impacts to listed buildings, Scheduled Monuments,
concern about the additional noise that would be caused by construction of the	and conservation areas. The assessments completed at this stage found that

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line, as well as that of the trains themselves. Several respondents mentioned that both construction and rail noise at night is a particular concern. Several other respondents remarked that diesel and freight trains would be particularly noisy. A small number claimed that the noise from rail line would cause them physical harm, due to potential sleep deprivation from trains running at night.

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Route Alignment 8 performs worse than the NSC emerging preferences Alignment 1 and 9, and would have an adverse impact on the complex heritage resource area of the Bourn Valley and the route would be within 1km of approximately 232 listed buildings. This is the most of all route alignment options with a total of eight listed buildings being located within Renhold. Due to the scale and nature of EWR, noise and vibration impacts are inevitable and all route alignment options would impact some villages. As noted in the discussion of assessment factor 14.13 (Noise and Vibration) in Appendix E, Route Alignment 8 would result in adverse impacts to several communities, though with appropriate mitigation, this potential impact could be reduced to a smaller number of communities at Ravensden Church End. Woodend Lane, Bedford Road and Crow End. EWR Co considers that impacts on communities could be reduced by routing EWR close to the existing travel corridor of the A428, as this would allow some adverse impacts to be concentrated in this corridor rather than in areas not already subject to development. By routing along the A428 travel corridor, Route Alignment 1 would have a reduced impact on heritage assets and properties. This was a differentiating factor in the decision to choose Route Alignment 1 as an emerging preferred route alignment at NSC. Route Alignment 1 would also affect a fewer number of residential properties in terms of noise and vibration impacts (assessment factor 14.13), though this was not considered to be a differentiating factor on its own. As set out in paragraph 4.3.26 of the Consultation Technical Report, EWR Co will seek ways to construct the works that minimise vibration but inevitably some activities, such as piling (the construction of deep foundations for structures), will be necessary. In such instances, EWR Co will ensure that working hours are limited and that surveys will be carried out to assess and manage the risk to homeowners where properties are likely to be affected. In relation to concerns about increased noise pollution from elevated parts of the railway, EWR Co has been reviewing the design of the Section D route since consultation and looking for opportunities to reduce the height of embankments and viaducts within the design. Comprehensive assessments will be carried out and will use industry-leading computer modelling, which can incorporate information on factors such as local geology and track height, to simulate potential noise and vibration impacts along the whole route. This will include impacts on residential and historic buildings, as part of the assessments on any mitigations required. EWR Co will develop a Preliminary

## **Matter Raised EWR Co Response** Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include information regarding the existing baseline noise environment, together with construction and operational noise limits having had regard to the appropriate guidance and legislation. Construction and operational noise levels generated from the proposed works will also be presented as part of the PEIR which will form elements to be considered at Statutory Consultation. A full environmental statement will then be submitted as part of the development consent order application. Ahead of DCO submission, EWR Co will develop a noise policy, which will set out a plan designed to establish and mitigate noise and vibration to avoid any significant adverse impacts on health and quality of life. Additionally, further detail will be provided on the freight strategy, and the approach to avoiding or reducing potential noise and vibration impacts from freight trains which may run on EWR, during a phase of statutory consultation. EWR Co is also continuing to explore ways of reducing noise and vibration impacts when EWR services are operational, such as considering the types of trains used and track technologies. Construction noise / working hours: the working hours at the worksites will depend on the construction activities being undertaken. The works will be constructed over extended periods of time and there will be variations in the hours of working between sites for practicality and safety reasons. This will be developed further following the consultation process and agreed with the relevant local authorities and approval bodies. The likely working hours for the various construction works inform the programme and consenting process. While flexibility needs to be retained to ensure that the works can be delivered on time, EWR Co is committed to ensuring that the programme for construction works is sensitive to affected stakeholders. EWR Co will therefore be working closely with affected stakeholders to understand any concerns that they have and any reasonable mitigation that EWR Co may be able to provide. Further information will be available in the Code of Construction Practice (CoCP), or an equivalent

document, which will also set out the steps EWR Co will take to reduce noise and

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	vibration impacts during construction. EWR Co proposed operational hours for
	passenger services in Appendices A and B of the 2021 Consultation Technical
	Report, which referred to a potential public facing timetables (planned trains in
	passenger services) to provide some initial guidance. There will also be less
	intensive train movements as required outside these hours for infrastructure
	maintenance, inspection, freight and other activities as part of the national rail
	network. We will continue to work on the concept of operation to inform the
	operational timetable
A substantial number of respondents expressed concern about the potential	In developing our proposals, EWR Co has aimed to minimise the negative impact
impact of Alignment 1 on homes and property values in the area. Most of these	this may have on communities and in particular people's homes, inevitably with an
respondents claimed this route alignment option will travel too close to homes	infrastructure project of this size, there will be some people who could be directly
generally, and particularly to the town of Cambourne and the new housing	affected. EWR Co will continue to work to mitigate any impacts we cannot avoid
developments at Bourn. Many respondents voiced concern over loss of houses	and work closely with people who could be affected. Housing developments EWR
along the route, stating that they oppose any demolition of properties/houses.	Co has taken into account potential effects on committed developments along
	each route alignment (assessment factor 14.14). All route alignments were
	considered neutral when assessed against the reference alignment (Alignment 8)
	and, as such, this was not a differentiating factor. The design aims to reduce and
	mitigate the impacts on the developments at Bourn Airfield and Highfields
	Caldecote. Route Alignments 1 and 9 would only impact the northeast corner of
	the proposed Bourn Airfield development and it is considered most of the
	development could be delivered unimpeded. Since the 2021 consultation the
	design has been amended to avoid having a direct impact on the Linden Homes
	development at All Angels Park. Any additional mitigation required will be
	considered in later phases of project development.
	Impact on other transport projects: EWR Co will continue to work closely with key
	stakeholders including Network Rail, National Highways and Councils along the
	route to liaise with them regarding other projects in the area as the EWR design
	develops to manage the interfaces between them as effectively as possible.
	Demolition, compensation, and impact on property value EWR Co has taken into
	account the direct impact on properties along each route alignment option. Of all
	shortlisted NSC route alignments, Route Alignment 1 would pass within 500m of
	the fewest number of homes and would require the demolition of just four
	properties. Route Alignment 1 would also pass within 1km of the fewest number

#### **EWR Co Response Matter Raised** of heritage assets, with no listed buildings and only one Scheduled Monument within 250m of the alignment. As such, it performs well in comparison to the other route alignments. Where land is acquired or proposed to be acquired, the Compensation Code sets out the circumstances in which compensation is payable, EWR Co provided a guide to compulsory purchase compensation: Guide to Compulsory Acquisition and Compensation. Compensation is also available for properties in proximity to the new railway which may be affected by various physical factors of the operation of the railway once it is in use, this is referred to as Part 1 compensation for which we included a guide on the website – Guide to Part 1 claims EWR Co consulted on a proposed Need to Sell scheme at the same time as the main Non-Statutory Consultation. EWR Co has introduced the Proposed Need to Sell Property Scheme aims to assist eligible property owners who have a compelling need to sell while the EWR Project is in development and delivery, but who have been unable to do so other than at a substantially reduced value because of the EWR project. The Proposed Need to Sell Property Scheme is separate to the statutory blight notice process and (as the trigger for statutory blight is the submission of a DCO application) it provides early support for eligible property owners who can satisfy the criteria of the Proposed Need to Sell Property Scheme. The details for the Guide to the Proposed Need to Sell Property Scheme are available here: The Guide to the Proposed Need to Sell Property Scheme. Impact on roads EWR Co has considered the impact of the Project on existing highways, PRoWs and private access roads as part of the design and assessment of route alignment options. EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. A substantial number of respondents expressed concern about the potential Concerns around access during construction; closure of pathways; loss of PRoWs negative impacts of this route alignment option on roads and paths. Many EWR Co has considered the impact of the Project on existing highways, Public mentioned specific roads, including the A1, the A421 and the A428. A considerable Rights of Way (PRoWs) and private access roads as part of the design and number claimed that construction traffic and those travelling to access the line, assessment of route alignment options, including roads mentioned by would increase traffic on these roads. These respondents also claimed that the respondents. Route Alignment 9 would be expected to cross 64 PRoW, and based roads around Alignment 9 are unfit to handle additional traffic, as they are narrow on the level of information available, this is expected to be a neutral impact for all and winding countryside roads. Many respondents voiced their concern over Route Alignments. During construction, EWR Co will seek to reduce impacts on accessibility of footpaths and bridleways around the route, and remark that this PRoWs. Where a PRoW is affected, EWR will consider options that include closing

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alignment has the potential to sever the surrounding recreational walking, cycling and horse-riding routes in the surrounding villages, and that the presence of trains would lessen their enjoyment of these paths.

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the route temporarily, providing a temporary diversion, or opening an alternative permanent route before the existing one is closed. How the impacts are mitigated will depend on factors such as the type of works in the area and the safety and security implications. EWR Co expects to set out impacts at an early stage with a Preliminary Environment Information Report (PEIR) at statutory consultation with more detailed findings presented within the Environmental Statement submitted as part of the DCO submission. EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoW and private access roads at the statutory consultation.

Risk of Highfields Caldecote being cut off during construction phase: Route Alignment 9 would cross Highfields Road north of Highfields Caldecote. EWR Co has considered the impact of the Project on existing highways, PRoWs and private access roads as part of the design and assessment of route alignment options. EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. Safety of pedestrians and road users during construction EWR has considered safety and security of the public and workers at all stages of design, and this will continue during construction and the route's operation and maintenance. The safety and security of workers, road users, non-motorised users (NMUs), supply chain and local people has been prioritised and considered so that risks are eliminated wherever possible. During construction, EWR Co will ensure that health, safety, security and wellbeing performance meets and exceeds minimum legal requirements and industry best practice. The Code of Construction Practice (CoCP) or an equivalent document will also set out additional standards to maintain safety and security during construction. Disruption during construction: additional traffic; suitability of roads used; degradation of road surfaces; impact on A1, A421 and A428. In Route Alignment 9, there would be viaducts over the A421 and A1 roads and the

## **Matter Raised EWR Co Response** River Great Ouse. The alignment crosses under the proposed A428 Improvement Scheme and under the B1046. The B1046 is a side road which intersects with the A428 and is part of the A428 Improvement Scheme. EWR Co is working closely with key stakeholders including National Highways, A428 Improvement Scheme and local councils to enable impacts on and interfaces with local infrastructure to be appropriately managed and opportunities explored. With regard to impacts to the highway network during construction, EWR Co will develop a comprehensive logistics strategy that must be adopted by all contractors and suppliers. This will mean that EWR Co can plan the way in which people, materials and equipment are moved to and from the various worksites along the route of the proposed railway, working with local authorities and other developers to ensure that EWR Co's use of the local highway network is managed and that construction traffic is restricted to those roads which are suitable and have the capacity to safely accommodate the additional traffic and these roads are appropriate maintained during construction. As a result, this is not a consideration that differentiates between route alignments. Additional traffic from people accessing the stations. Traffic and the potential for congestion around stations is expected to be the same for all station location options and will be further examined at the next stage of design. When the final route alignment has been chosen, EWR Co will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. This will form part of the Environmental Statement that is submitted alongside the DCO application. A substantial number of respondents expressed concern about the potential negative visual impact of this alignment, particularly the visual impact of cuttings Landscape alteration: all route alignments have the potential to cause adverse on the hills in the area. Many of these respondents specifically state that the rural impacts on the rural landscape, and all include viaducts, embankments, cuttings nature of the area makes it unsuitable for such a project. and other structures. EWR Co has taken into account these impacts as part of the environmental appraisal detailed in Appendix E of the NSC Technical Report. Overall for Landscape and Visual Route Alignment 2 was assessed as neutral compared to the Reference Case (Alignment 8). This is due to Alignment 2 having notably less landscape impacts in comparison to the Reference Case, due to it not impacting on any landscape designations and on only a few woodlands. While Alignment 2 has greater visual impact than the Reference Case (see visual impact below), the overall assessment for Landscape and Visual was neutral compared to

## **Matter Raised EWR Co Response** the Reference Case. Alignment 1, an emerging preference at NSC, represents a minor improvement to the Reference Case. The landscape between Bourn and Toft, and the area of Bourn Valley were not specifically assessed at the nonstatutory consultation stage. At the statutory consultation we will share more information about specific areas, including the landscape between Bourn and Toft, and the potential environmental impact of the proposals. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals that will also be presented at the statutory consultation. Visual impact (inc. embankments, viaducts and cuttings): assessment factor 14.11 (Landscape and Visual) includes an assessment of the visual impacts of each route alignment, and an assessment of the impact upon landscape character. This assessment took into account the impact of structures including embankments, viaducts and cuttings on receptors including settlements, country parks (e.g. Brickhill Country Park) and 'other park land' (e.g. All Angels Park). In regard to construction of cuttings and other infrastructure, the design solution and construction planning will consider potential construction and longer-term environmental impacts of the scheme, and EWR Co will seek to include specific measures to reduce the impact of the Project on the surrounding environment during construction and operation. For example, measures to reduce visual intrusion may include the use of landscaping and screening. At the statutory consultation we will share more information about potential visual impacts. Route Alignment 2 would have far greater visual impact than the Reference Case (Alignment 8), with very high visual impacts upon Chawston due to the A1 viaduct. It would also cause moderate visual impacts at Caxton, Caldecote, Great Cambourne, Lower Cambourne and Kingston due to the alignment being south of Cambourne and would result in additional visual impact upon Eltisley. The landscape between Bourn and Toft, and the area of Bourn Valley were not specifically assessed at the non-statutory consultation stage. At the statutory consultation EWR Co will share more information about specific areas, including the landscape between Bourn and Toft, and the potential environmental impact of

the proposals. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals that will also

#### **Matter Raised EWR Co Response** be presented at the statutory consultation. EWR Co recognises that the countryside, parks and green spaces, and access to them is important and will work to reduce the impact of the Project. To help reduce impacts, EWR Co is following the environmental mitigation hierarchy by seeking to avoid significant adverse effects on the countryside and, where this isn't possible, seeking to reduce and mitigate impacts and if necessary, providing compensation where this is feasible. At this stage EWR Co is primarily focused on trying to avoid and reduce impacts, by making decisions that help EWR Co 'design out' the potential for environmental impacts. This alignment routes south of Cambourne and crosses a groundwater SPZ. This alignment would be likely to result in a lower carbon footprint than the Reference Alignment, predominantly due to a decrease in the number of viaducts and bridges required. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. This include minimising the amount the railway alignment is raised while allowing for road and other accesses to cross over or under the railway. When considering these opportunities, we aim to balance the overall impact of our design. Heritage assets and conservation areas/impact to the Bourn Brook Valley Alignment 2 is north of and in parallel to the A428 resulting in passing closer to fewer Listed Buildings and Scheduled Monuments (SM) than the Reference Case and avoids the heritage sensitive areas at Tempsford and Roxton. This reduces the likelihood of additional setting impacts to listed buildings and SMs in the vicinity as fewer assets would be impacted. However, to the south of Cambourne, Alignment 2 would pass through the complex heritage resource area of the Bourn Valley and, east of Eltisley, comes in close proximity to a Scheduled Monument and associated listed building ("Pastures Farm – Moated site at Pastures Farm" and "Dovecote to the North East of Caxton Pastures Farmhouse") which is likely to result in adverse setting impacts to the designated assets. The alignment passes within 500m of six conservation areas. This includes Bourn - Village & Hall, Caldecote, Harlton, Kingston, Toft and Bedford. Despite coming closer to this particular SM and coming in close proximity to slightly more SMs overall than the Reference Case, due to the benefits of

keeping north via St Neots in the western section this option avoids the heritage sensitive areas at Tempsford and Roxton. Alignment 2 passes within 500m of six conservation areas totalling 464,734m2; considerably less than the Reference

# **EWR Co Response Matter Raised** Case. This includes: Bourn – Village & Hall, Caldecote, Harlton, Kingston, Toft and Bedford. Alignment 2 represents a minor improvement compared to the Reference Case for Assessment factor 14.10 (Historic Environment). This Assessment factor includes detail on the proximity of designated and nondesignated heritage assets to each of the route alignments, and therefore contains a qualitative assessment of the likelihood of 'setting impacts' to each of these designations. In terms of historical buildings and conservation areas, due to it being located north of and in parallel to the A428, Route Alignment 2 passes closer to fewer listed buildings than the Reference Case (Route Alignment 8) and reduces the likelihood of additional setting impacts to listed buildings and Scheduled Monuments in the vicinity as fewer assets would be impacted. This is reported as part of the Historic Environment assessment (page 5 of the NSC Technical Report Appendix E). At the statutory consultation we will share more information about specific areas and the potential environmental impact. Impact on farmland: EWR Co has aimed to minimise negative impacts on communities, people's homes and farmland. However, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts that cannot be avoided and will work closely with people who could be affected. Alignment 2 would be likely to impact approximately 40 farm holdings, of which two would be likely to experience a major impact from the construction of the Project. EWR Co has taken disruption to farmland into account as part of the 'Agriculture, Forestry and Soils' Assessment Factor (14.1), as set out in Appendix E of the NSC Technical Report. Route Alignment 2 was assessed to represent a minor improvement when compared to the Reference Case (Route Alignment 8). Further information on details on the impact on farmland will be made available at the statutory consultation. Shading and lighting: EWR Co recognises that light pollution from both the construction and operation of a railway is an important issue for local communities. The potential effects of light pollution from the railway will be considered as EWR Co develops the designs for the Project. This will include

considering the type, location and layout of lighting in construction compounds

#### **EWR Co Response Matter Raised** and work areas, stations, maintenance compounds and new access routes. Through the design EWR Co will seek to avoid impacts on "sensitive receptors", such as nearby residential areas or ecological habitats. Construction-related impacts on the environment will be identified and managed, as far as reasonably practicable, by a Code of Construction Practice or an equivalent document submitted alongside a Development Consent Order (DCO) application. This will include measures to control impacts related to construction lighting. Impact on country parks: assessing the impact of the Project on the environment is a fundamental part of the design of the scheme's development, including possible mitigations. This includes consideration of the setting and context of landscapes and historic views, and visual impacts on country parks. EWR Co is carefully considering how the development can be designed to blend in with the local environment. This includes the consideration of where to create embankments and where viaducts are potentially required. Further examples of where visual impacts are being considered are the potential for the use of landscape earthworks to soften the appearance of embankments and integrate them into the wider landscape context and the sensitive placement of appropriate planting to either screen views from sensitive receptors, or to soften the appearance and presence of engineering earthworks. A substantial number of respondents expressed concern about the potential visual EWR Co has taken into account the visual impact that each route alignment option impact of this route alignment option. These respondents felt that Alignment 8 would have on the local setting (assessment factor 14.11). Alignment 8 is judged would obstruct views across the surrounding countryside, and that measures such to have some very high visual impacts, particularly on residents of Renhold, as cuttings would be inadequate to mitigate this. Furthermore, several Roxton and Crow End, with moderate impacts on other settlements including respondents highlight the raised elements, such as viaducts and embankments, as those south of Cambourne. Five of the Route Alignments would be deemed an being particularly visually obtrusive. Some respondents also stated that lighting improvement when compared to Route Alignment 8, and Route Alignment 1, an during construction, as well as lighting for the tracks during operation, would emerging preferred alignment at NSC, would be a minor improvement. Mitigation contribute to light pollution in the area. measures, such as cuttings and planting, will be worked up during the next stage of design and more detailed will be provided at the statutory consultation. While the use of viaducts would create adverse visual impacts on some local communities, they are required in order to reduce the impact on flood plains in the area. However, Alignment 1 would require a smaller number of viaducts and bridges, therefore reducing the visual impact of the the Project. Additionally, since consultation, EWR Co has been reviewing the design of the Section D route and

#### **EWR Co Response Matter Raised** looking for opportunities to reduce the height of embankments and viaducts within the design. Lighting – construction and operation: the potential effects of light pollution from the railway will be considered as EWR Co develops the designs for the Project. This will include considering the type, location, and layout of lighting in construction compounds and work areas, stations, maintenance compounds and new access routes. Through the design, EWR Co will seek to avoid impacts on sensitive receptors, such as nearby residential areas or ecological habitats. Further information regarding design will be available during future consultations, while the Code of Construction Practice (CoCP), or an equivalent document, will set out how lighting during construction will be managed and mitigated where possible. A substantial number of respondents expressed concern about the value for money of Alignment 9. Many feel that the route would be prohibitively complex to Concerns about cost of scheme – complexity, length of route, topography, build, due to the undulating terrain. Several respondents also claimed that the compensation for developers: Capital costs associated with the shortlisted route terrain would increase the cost of the route, as well as the cost of travelling on the alignments were considered in the appraisal and are discussed in the evaluation of route, due to the additional journey times. Several respondents expressed assessment factor 3 in Appendix E of the Technical Report. The assessment factor considered the upfront cost to implement the Project, land and property costs concern that mitigation measures, such as building cuttings and tunnels, could including for compensation, and considerations of cost risk and programme risk. increase the cost beyond acceptable levels, and others state that this construction should not be carried out during a time when the Government is already having to Further information on how these factors were assessed can be found in in spend large amounts of money. Appendix C of the Non-Statutory Consultation Technical Report. When compared to the Reference Case, Route Alignment 9 has less earthworks and shorter overall length of structures. It is expected to be slightly less expensive than the Reference Case and is therefore considered neutral in terms of upfront cost to implement the scheme. Route Alignment 1 (an emerging preferred option at NSC) showed a minor improvement on this. The alignments serving a Tempsford station location (the Reference Case and Route Alignment 9) are expected to have greater capital costs than those with a station at St Neots South due to the length of bridges and viaducts required and a higher level of material needed for earthworks. Comparable alignment options which connect to Cambourne North were estimated to have a lower cost than options connecting to Cambourne South.

Route Alignment 9 has a longer route length and additional complexity due to two more complex structures than the reference case. In terms of Programme Risk (level of confidence in estimate of delivery time and scale of potential impact on

#### **Matter Raised EWR Co Response** entry into service date), Route Alignment 9 would therefore be a minor worsening when compared to the reference case (Route Alignment 8). Route Alignment 1 is judged neutral when compared to the Reference Case. Programme risk will be further understood when more detailed assessments have been undertaken and the construction programme is developed. EWR Co is committed to running a sustainable railway in the long term, with an ambition to be a net zero carbon railway. This includes the use of sustainable traction power in the long term. EWR Co is exploring how it can introduce new and emerging technologies, in addition to electrification, into the long-term train fleet and infrastructure. Case for EWR; Covid impact on demand Funding – reliant on associated local developments; concerns re. impact on taxpayers: the Case for EWR is detailed in Chapter 2 of the NSC Technical Report. EWR is part of the Government agenda to create a range of opportunities for people right across the area and help to spread prosperity across the UK, and Section D of the route is considered crucial in achieving this. The funding strategy for the scheme is still being developed. With regard to the impact of Covid-19, as detailed in paragraph 2.2.4 of the NSC Technical Report, the outbreak has significantly cut demand for rail travel in the short term. However, EWR would not enter into service until the end of the decade and the purpose of EWR is to enhance connectivity across the Oxford to Cambridge area as a whole – and work is still ongoing to understand how the Covid-19 pandemic may affect commuter travel patterns over the longer-term. Latest statistics released by the Department for Transport (DfT) show that national rail usage is currently around 80% of pre-covid levels (https://www.gov.uk/government/statistics/transport-use-during-thecoronavirus-covid-19-pandemic). EWR Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development.

osts: these costs have not been calculated at this stage but are not a significant differentiator and no indicators currently suggest that nt 9 would require significantly more or less maintenance than gnments. All route alignment options have been scored neutral nent factor 5) at this stage in the design process, as differences in ost are not expected to be a significant differentiator.
ecific ticket prices cannot be provided at the moment, but more
Il be provided as the Project develops.  Inent options have the potential to cause adverse impacts on the et, and all include viaducts, embankments and other structures. EWR atto account these impacts as part of the environmental appraisal bendix E of the NSC Technical Report. Route Alignment 1 would have landscape impacts than the Reference Case (Route Alignment 8). voiding impacts upon landscape designations at Brickhill Country Great Ouse valley and indirect impacts upon the character of isual impacts of the Route Alignment options were assessed as part factor 14.11 (Landscape and Visual). While all route alignment result in new elements in rural landscapes, Route Alignment 1 (and ints 9) offer the ability to concentrate impacts in the A428 corridor, areas not already subject to development. Route Alignment 1 would upon landscape designations at Brickhill Country Park, the River ley and indirect impacts upon the character of Roxton Park. The Alignment 1 does result in some areas of woodland loss at All ditrees lining Bourne Brook in addition to visual impacts at to the A1 viaduct. Overall, Route Alignment 1 is considered a minor in relation to the Reference Case (Route Alignment 8). Route ould cause negative visual impacts to Chawston from the A1 ould have reduced visual impacts to other areas, such as the south of Cambourne. EWR Co will develop an understanding of indscape character areas and visual resources and how they are
riner plan / iller

#### **Matter Raised EWR Co Response** which make up the landscape character. We will develop a PEIR to describe the likely adverse and beneficial environmental effects of the proposals, which will include information regarding the landscape and visual baseline, preliminary construction and operation assessment of impact on landscape character and views. Zone of Theoretical Visibility will be produced to inform extent of views. The PEIR will be presented at statutory consultation with a full Environmental Statement being submitted as part of the DCO application. Overall, the landscape and visual impact from Route Alignment 1 represents a minor improvement on the Reference Case (Route Alignment 8), and this was a differentiating factor in the decision to choose Alignment 1 as an emerging preferred option at NSC. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co will also consider further mitigation for visual impacts to help the scheme blend in with the local environment, such as landscape earthworks or sensitive placement of appropriate planting to soften the appearance of embankments. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. A substantial number of respondents expressed concern over potential negative Concern regarding conflict with precedent set-in previous planning application impacts of this route alignment option on the local landscape. Most of these (Harbourne, 2018) regarding impacts on the rural landscape Respondents respondents claimed that the landscape near the route is untouched, and that concerns regarding conflict with precedent set in previous planning applications and the impact on the rural landscape will be considered in the next phase of large infrastructure would have unacceptable visual impacts, given the area's natural beauty. A considerable number of these respondents voiced concern consultation. Concerns raised regarding loss of countryside and visual impacts; about the height of embankments and viaducts which could be used for this route, visual impact of loss of agricultural land All Route Alignments would result in new which they feel would be particularly unsuitable for this rural area. A small elements in rural landscapes. However, the emerging preferred alignments at NSC

Route Alignments 9 and 1 (in addition to Route Alignment 2) offer the ability to

#### Matter Raised EWR Co Response

number of respondents remarked that floodlights from construction, as well as lighting the track itself, would impede the naturally dark skies of the region.

concentrate impacts in the A428 corridor, rather than in areas not already subject to development. As discussed in the evaluation of assessment factor 14.11 in Appendix E of the Technical Report, Route Alignment 9 has a neutral combined landscape and visual impacts in comparison to the reference case (Route Alignment 8). Route Alignment 9 has similar levels of landscape impact to the reference case, including impacts upon Brickhill Country Park, the River Great Ouse valley and indirect impacts upon the character of Roxton Park. It has marginally higher landscape impacts due to loss of woodland on the North of Cambourne alignment (All Angels Park and trees lining Bourn Brook) which would impact upon local landscape character. Route Alignment 1 (an emerging preferred option at NSC alongside Alignment 9), demonstrates a minor improvement on this. Based on the length of Route Alignment 9, it would require more agricultural land compared to the Reference Case, and is likely to impact approximately 39 farm holdings (based on available information). One of these 39 farm holdings would be likely to experience a major adverse impact from the construction of the scheme. EWR Co understands the importance of agriculture and farmland to the communities the railway will serve. At each stage of the planning and development process, the company will assess the environmental impacts to farmland and countryside and explore ways to reduce or mitigate the impact of the railway on these important areas. EWR Co will continue to work with landowners and managers to gather information that will help inform the design process. Light pollution The potential effects of light pollution from the railway will be considered as EWR Co develops designs for the project. It is not possible to assess the impact of light pollution in detail at this stage because parts of the scheme that could have an effect on light pollution such as location and layout of stations, maintenance compounds and new access routes have not yet been finalised. Through the design EWR Co will seek to avoid impacts on 'sensitive receptors', such as nearby residential areas or ecological habitats. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely adverse and beneficial environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts and likely beneficial effects. The PEIR will include assessments of disturbance to ecological receptors,

#### **EWR Co Response Matter Raised** and to local amenity and tranquillity from construction and operational lighting. This will be presented at the statutory consultation with a full environmental statement being submitted as part of the development consent order application. Construction related impacts on the environment will be identified and managed as far as reasonably practicable, by a Code of Construction Practice or an equivalent document submitted alongside a DCO application. Compliance with the CoCP or equivalent document will be secured through the Requirements of the DCO itself. This will include measures to control impacts related to construction lighting. Concerns regarding visual impact of embankments and viaducts; suggestion to use tunnelling: since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co continues to explore the use of tunnels for the scheme during the design process but only considers them to be a practical option in specific areas where they can provide a solution for addressing particular constraints. This is partly because they are more complex and expensive to build, operate and maintain than above ground structures, and also require additional surface structures for ventilation and exit in case of emergency. Alignment 9 has visual impacts, including impacts upon Brickhill Country Park, the River Great Ouse valley and indirect impacts upon the character of Roxton Park. NSC emerging preferred options Route Alignments 1 and 9, and EWR Co's Preferred Alignment 1 (Tempsford variant), would all result in the loss of woodland on the North of Cambourne. As discussed in the evaluation of assessment factor 14.11 in Appendix E of the Technical Report, Route Alignment 9 has been judged as Neutral for combined landscape and visual impacts in comparison to the reference case (Route Alignment 8). For this assessment factor Alignment 1 was judged as a minor improvement, as it avoids

indirect impacts upon the character of Roxton Park.

# Matter Raised EWR Co Response Concerns regarding

A substantial number of respondents expressed concern over potential negative visual impacts of this section. Most claimed that the rural nature of North Bedfordshire makes this area unsuitable for large-scale infrastructure. These respondents claimed that the undulating landscape and rural nature of the region mean that local residents would be more acutely aware of new and unfamiliar construction. A considerable number of respondents also stated that any use of viaducts or embankments, regardless of length or location, would add an unacceptable level of visual impact. Several respondents stated that the choice of route alignment is also irrelevant in this regard for the people of Clapham, who they remark would be affected regardless of which route the section takes. Some respondents raised concerns about the potential additional light pollution.

Concerns regarding urban sprawl: EWR Co has considered the potential for coalescence of smaller villages along the route, due to an increase in development. As stated in paragraph 9.6.28 of the NSC Technical Report, a station at Cambourne North, and the subsequent housing and economic development, is expected to be able to retain separation from and between existing settlements. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. A development at Cambourne South station would have a risk of coalescence with smaller villages such as Caxton, Caxton End and Crow End. This is also considered to be a risk of coalescence at Tempsford (i.e., with Tempsford, Everton, Little Barford and Sandy), but it is not considered as large as the risk as St Neots as the Tempsford location is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

Demolition of homes: All route options are expected to require residential demolitions. EWR Co considered the direct impact of proposed Route Alignments on residential properties (assessment factor 14.4 as per Appendix E of the NSC Technical Report), in addition to impacts on built heritage and historic landscape (assessment factor 14.9). The reference case would result in the demolition of 8 properties. Of all shortlisted route alignments, Route Alignment 1 (an emerging preferred alignment at NSC) would pass within 500m of the fewest number of homes and would require the demolition of just four properties. Route Alignment 1 would also pass within 1km of the fewest number of heritage assets, with no Listed Buildings and only 1 Scheduled Monument within 250m of the alignment. Route Alignments 7,5,1,9 and 3 are considered to represent a minor improvement on the reference case, with other options being considered neutral.

#### **Matter Raised EWR Co Response** Impacts on Historical / heritage landscapes: the impact of the proposed route alignments on the historic environment (including listed buildings and historic landscape) was considered as part of assessment factor 14.9. The reference case passes within 250m of three Scheduled Monuments, within 500m of ten conservation areas. Route Alignment 1 (an emerging preference at NSC) would pass within 1km of the fewest number of heritage assets and would pass within 500 metres of the fewest number of conservation areas in comparison to the other route alignments. As the design of the preferred route alignment, Route Alignment 1 (Tempsford variant), develops EWR Co will continue to consider the setting and context of historic and cultural assets including conservation areas, archaeology, listed buildings and structures, historic views, and landscapes. As far as is reasonably practicable EWR Co will aim to avoid harm to the setting of designated heritage assets, prioritising those of the highest sensitivity such as Scheduled Monuments, Grade I and Grade II listed buildings and parks and gardens. In order to do this, early identification and surveys of those assets most likely to be affected will be carried out so the scheme can be designed to avoid these and where this is not possible, incorporate appropriate mitigation measures into the design. EWR Co will continue engaging with heritage organisations such as Historic England and Local Planning Authority Archaeology and Conservation Officers to inform this work. The impact on heritage assets will be assessed in Environmental Statement that will accompany the DCO application. The PEIR will be available at the statutory consultation. Impacts on countryside / wildlife / woodlands: EWR Co has considered a range of environmental factors when assessing the proposed route alignments, including impacts to landscape character, habitats, and ancient woodland (assessment factors 14.11 and 14.5 as detailed in Appendix E of the NSC Technical Report). The design process also follows the environmental mitigation hierarchy, which prioritises seeking opportunities to avoid significant adverse effects on the environment, then reducing or mitigating impacts where avoiding them is not possible. All proposed alignments would avoid direct impacts on the most significant nationally and internationally designated environmental assets, including ancient woodland, National Nature Reserves, Sites of Special Scientific Interest and Special Areas of Conservation. The reference case involves a large

# **EWR Co Response Matter Raised** overlap with the Impact Risk Zone (IRZ) to the Weaveley and Sand Woods SSSI, and further indirect impacts to a high number of ancient woodland sites. It has a relatively low impact to mapped priority habitat areas, in terms of extent of impact and number of sites. In comparison, Route Alignment 1 (an emerging preferred option at NSC) would involve no overlap with SSSI IRZs, no indirect impact to ancient woodland sites, but relatively higher impacts to mapped priority habitat areas, representing a minor improvement on the reference case. It is considered that this impact could be mitigated. EWR Co will work with environmental stakeholders to help inform the design and appropriate mitigation in order to reduce the impacts of the scheme as far as reasonably practicable. When the final route alignment has been chosen, an Environmental Impact Assessment will be undertaken for the Environmental Statement, which will identify the impacts of the scheme and set out the proposed mitigation. Impact and approach to allotments: in relation to local allotments present along the proposed route alignment, EWR Co will seek to engage with communities and their representatives with the aim of identifying their locations and reducing impacts of the scheme where practicable. Impacts on farmland: at each stage of the planning and development process, EWR Co is assessing the environmental impacts on important areas such as farmland and countryside. Assessment factor 14.1 looked at the potential adverse impacts on farm holdings, including the loss or severance of land and the disruption to farming practices (including draining and irrigation). The reference case is likely to impact approximately 50 farm holdings, two of which would be likely to experience a major adverse impact from the construction of the scheme. Route Alignment 1, an emerging preferred alignment at NSC, is likely to impact a greater amount of farmland, but fewer holdings, and is therefore considered neutral when compared to the Reference Case (Route Alignment 8). EWR Co will seek to reduce or mitigate impacts of the scheme on farmland where possible during the design process and in discussion with affected landowners. Design process to reduce impact, reducing viaducts and embankments: the longerterm environmental impacts of the scheme will be considered in the design

# **Matter Raised EWR Co Response** solution, and EWR Co will seek to include specific measures within the design that reduce the impact of the Project on the surrounding environment during construction and operation. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. Station design approach – landscape, access, future development: when assessing the different station location options for the scheme, EWR Co has considered a number of factors including how different locations might influence the development potential of their surrounding areas. This is discussed in the evaluation of assessment factor 2. Although EWR Co is still developing its analysis of each station option's potential for housing development, the evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South and so is more likely to be realised. Housing development at Cambourne North is expected to be able to retain separation from and between existing settlements such as Papworth Everard, Knapwell and Elsworth. There will be significant planning work for each of the stations/local areas in the subsequent design stages in collaboration with local planning authorities, which will also consider how the stations will look in the local environment. When designs for the proposed stations have been completed, these will be assessed against Assessment Factors, including accessibility (as part of design consideration assessment factor 14). Landscape and visual impacts and urbanization of countryside: assessing the impact of the Project on the environment is a fundamental part of the design and development, including possible mitigations. This includes consideration of landscape and visual impacts. EWR Co will seek to identify and protect important views where possible. There is no reason to assume any of the route alignment

options would be particularly susceptible to risk of graffiti and this is therefore not

#### **Matter Raised EWR Co Response** a differentiating factor. Precise maintenance costs have not been calculated at this stage and therefore all route alignment options have been scored neutral (under assessment factor 5) as differences in maintenance cost are not expected to be a significant differentiator. Regarding urbanization of countryside assessing the impact of the Project on the environment is a fundamental part of the design of the scheme's development, including possible mitigations. This includes consideration of the setting and context of landscapes and historic views, and visual impacts. EWR Co is carefully considering how the development can be designed to blend in with the local environment. This includes the consideration of where to create embankments and where viaducts are potentially required. Further examples of where visual impacts are being considered are the use of landscape earthworks to soften the appearance of embankments and integrate them into the wider landscape context or using sensitive placement of appropriate planting to either screen views from sensitive receptors, or to soften the appearance and presence of engineering earthworks. EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. Visual impacts of the final route alignment will be assessed as part of the Environmental Statement, which will be developed with the input of stakeholders. This will enable suitable mitigation to be designed and included where appropriate when the scheme is constructed, such as landscape earthworks or sensitive placement of appropriate planting to soften the appearance of embankments. For potential impacts on health and wellbeing please refer to the Local community response below. A substantial number of respondents expressed concern that this route alignment option would cause significant noise and vibration in the area. Many claimed that Working hours: the likely working hours for the various construction works inform the programme and consenting process. While flexibility needs to be retained to this could be exacerbated by the raised sections of the track proposed for Alignment 9, as the additional height would allow the sound to travel further and ensure that the works can be delivered on time, EWR Co is committed to ensuring have a greater impact. Several respondents also claimed that noise could have a that the programme for construction works is sensitive to affected stakeholders. negative impact on the learning of children in the local schools and could be both EWR Co will therefore be working closely with affected stakeholders to distracting and harmful to them. Many expressed concerns over vibration from understand any concerns that they have and any reasonable mitigation that EWR

#### **EWR Co Response Matter Raised** the rail lines, in particular, that these vibrations could structurally damage the Co may be able to provide. Further information will be available in the Code of traditionally built houses near the line. Construction Practice (CoCP) or an equivalent document. Noise and vibration impacts, assessment and mitigation: in relation to noise and vibration and in particular the number of communities which, despite mitigation, may still potentially experience likely significant effects, this would be one (northern end of Caldecote) for Route Alignment 9. The Reference Case (Route Alignment 8) would potentially impact one too, but this would be homes on Broadway, north of Bourne. All route alignment options would potentially affect one community within this indicator, so this is not a differentiating factor. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignment 9 between Bedford and Tempsford station, EWR Co has developed Alignment 1 (Tempsford variant). Alignment 1 (Tempsford variant), is a variation of Alignment 1, which deviates from Alignment 1 south of Colesden, then runs north of Roxton and serves a Tempsford station location. To the east of Tempsford station, Alignment 1 (Tempsford variant), would then follow the proposed route of Alignment 9, which merges with Alignment 1 east of Little Barford and then runs to a station north of Cambourne. Alignment 1 (Tempsford variant), would significantly reduce and/or mitigate potential impacts at Great Barford and Roxton associated with Alignment 9. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Comprehensive assessments will be carried out and will use industry-leading computer modelling, which can incorporate information on factors such as local geology and track height, to simulate potential noise and vibration impacts along the whole route as part of the assessments on any mitigations required. Impacts on sensitive receptors such as schools will be assessed as part of this work. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where

possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include information regarding the existing baseline noise environment, together with construction and operational noise limits having had regard to the

# **Matter Raised EWR Co Response** appropriate guidance and legislation. Construction and operational noise levels generated from the proposed works will also be presented as part of the PEIR which will form elements to be considered at the statutory consultation. A full Environmental Statement will then be submitted as part of the DCO application. Assessment of noise and vibration taking into account height railway and topology / environment and any sensitive receptors including schools: at a later stage in the planning and development process, EWR Co will develop a noise policy, which will set out a plan designed to establish and mitigate noise and vibration to avoid any significant adverse impacts on health and quality of life. EWR Co is committed to considering measures that will reduce noise and vibration, including choice of trains, track technology, and noise barriers. Vibration impacts on traditionally built houses. As set out in paragraph 4.3.26 of the Consultation Technical Report, EWR Co will seek ways to construct the works that minimise vibration but inevitably some activities, such as piling (the construction of deep foundations for structures), will be necessary. In such instances, EWR Co will ensure that working hours are limited and that surveys will be carried out to assess and manage the risk to homeowners where properties are likely to be affected. The impact of vibration from construction activity and operation of the railway on traditionally built houses mentioned by respondents has not been specifically assessed at this stage. EWR Co will take this into account for future assessments, should these properties be in the assessment corridor. A substantial number of respondents expressed support for this alignment because of its proposed stations and end points. A substantial number of these respondents expressed particular support for a Cambourne North station, and the subsequent northern approach into Cambridge. Several respondents claimed that a station to the north of Cambourne would make better use of the flatter, less developed land in the area than the proposed Cambourne South station.

Additionally, a considerable number of respondents supported this route alignment option as it allows for the northern approach into Cambridge. Many respondents specifically expressed support for a new station at Tempsford. Several respondents stated that they would use this station and they would find more utility in it than one at St Neots. Several other respondents remarked that St Neots already has a station, and that one at Tempsford would mean more people

Support for Tempsford (A) – opportunities for ECML connectivity, improved access (inc. parking), best option for future housing and development: with regard to the station at Tempsford, the quality of interchange with the ECML is not considered to be a differentiator between potential station locations at this stage of the design. As stated in paragraph 9.2.7 of the NSC Technical Report, a high-level station would be located on the EWR alignment with a potential corresponding low-level station on the ECML. A potential station on the ECML would allow passenger interchange between the two lines. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford

	WR Co Response
are being served by a local station. A small number claimed that a Tempsford va	variant), as part of the statutory consultation. Traffic and the potential for
station would be easier to access, considering existing congestion at St Neots.	congestion around stations is expected to be the same for all station location
	options and will be examined further at the next stage of design. There will be
	urther analysis to draw firmer conclusions on the potential for housing and
	growth across both these locations. EWR Co will consider options for connecting
	he stations to existing settlements, transport networks and sustainable transport
	nodes as part of our preparation for statutory consultation.
Su	Support for route and Cambourne North station: EWR Co has undertaken an
as	ssessment of the different station location options, which considered land
	availability and suitability, placemaking, planning constraints and socio-economic
	actors. This assessment, as detailed in paragraphs 9.6.21 – 9.6.53 of the NSC
	Technical Report, identified that development around the Cambourne North
	tation would require fewer, or less significant, mitigation measures than around
	Cambourne South. Traffic and the potential for congestion around stations is
	expected to be the same for all station location options and will be further
	examined at the next stage of design. Station designs for Cambourne North will
	nclude provision for public transport interchange and active travel facilities and
	outes to maintain connectivity with neighbouring villages and communities.
	Parking requirements will also be considered during this stage. While, as stated by
	respondents, a Cambourne North station would have a reduced noise impact to
	Cambourne compared with a Cambourne South station, this route alignment
	would impact a similar number of dwellings to the Reference Case (Route
	Alignment 8). Route Alignments 1, 2 and 6 would impact fewer homes, and epresent a minor improvement to this regard.
	mpacts on residents and developments Route Alignment 2 would require the
, , , , , , , , , , , , , , , , , , , ,	demolition of nine properties, which is the joint highest number with Route
,	Alignment 6 when comparing all the route alignment options. Of the nine
	properties, seven would be at Bourn and the remaining two properties would be
many respondents include boarn Annela and riiginicias caldecote.	near Eynesbury Hardwick and in Wilden. Route Alignment 1, an emerging
	preferred route at NSC, would avoid Bourn and would result in the demolition of
	our properties in total. These would be located at Two Potts Farm, Wilden and
	Synesbury. As such, Route Alignment 1 has a lower impact than Route Alignment 2
	n terms of number of properties demolished. In terms of dividing / splitting

#### **Matter Raised EWR Co Response** communities, all route alignments would create some level of severance between communities and services, although measures would be put in place to mitigate such severance at later design stages. The potential impacts on the communities in and around Route Alignment 2 are reported as part of the 'Community' assessment factor (page 3 of the NSC Technical Report, Appendix E), with Route Alignment 2 being judged as 'neutral' when compared to the Reference Case (Route Alignment 8). Alignment 1 was assessed as a minor improvement for Community when compared to the Reference Case. In terms of proposed developments, EWR Co has taken into account effects on committed developments along each route alignment option (assessment factor 14.14). Although Route Alignments 1 and 9, the emerging preferred alignments at NSC, would impact the developments at Bourn Airfield and All Angels Park, Highfields Caldecote, they would impact only the north-eastern corner of the proposed Bourn Airfield development and it is considered most of the development could be delivered unimpeded. Therefore, this did not result in any differentiating factors in the assessment, as all route alignments were considered neutral. Since the 2021 consultation the design for Alignment 1 and 9 has been amended to avoid having a direct impact on the Linden Homes development at All Angels Park. EWR Co takes the safety and security of its people, contractors, landowners, residents, communities and the local environment seriously and is legally required to put in place and enforce safer working policies. EWR will continue to consider safety and security of the public and workers during construction and the route's operation and maintenance. The safety of workers, road users, non-motorised users (NMUs), supply chain and local people has been prioritised and considered so that risks are eliminated wherever possible. During construction, EWR will ensure that health, safety, security and wellbeing performance meets and exceeds minimum legal requirements and industry best practise. The Code of Construction Practice (CoCP) or an equivalent document will include additional standards to maintain safety and security and set out how construction impacts will be monitored, controlled and managed. Alignment 2, and an emerging preference Route Alignment 1 were rated as minor improvements in comparison to the Reference Case (Route Alignment 8), as they require less earthworks and structural work and avoid an area of weaker geology, the exposed Ampthill clay

formation. In terms of noise and air pollution, EWR Co has taken into account

#### **EWR Co Response Matter Raised** these impacts as part of the environmental appraisal detailed in Appendix E of the NSC Technical Report. Assessment Factor. For the 'Noise & Vibration' assessment factor (14.14), Route Alignment 2 was rated as a minor improvement relative to the Reference Case (Route Alignment 8), due to the slightly smaller number of dwellings potentially affected, whilst for the 'Air Quality' assessment factor (14.2). It was also rated as a minor improvement in relation to air quality compared to the Reference Case for the same reason, and additionally, no AQMAs are likely to be impacted. Alignment 1, an emerging preferred alignment at NSC, was considered as a minor improvement for Noise & Vibration and major improvement for Air Quality Assessment Factors. All of the shortlisted route alignment options affect rural areas to some extent, and were they not to do so they would pass through settlements, with a greater impact on residents. Therefore, EWR Co has sought to strike a balance between impacts on the countryside and settlements. EWR Co is considering potential impacts on the community and how to reduce or mitigate disruption to local people, communities and the environment and how to avoid significant adverse impacts on health and quality of life. The company is considering a range of matters including sound, noise and vibration, air quality, as well as potential impacts on public rights of way (PRoWs) and land and property requirements. Further information will be presented on this within the PEIR and at the statutory consultation. Connectivity In terms of connectivity to Cambridge and within the wider area, the purpose of EWR is to provide new connectivity across the Oxford to Cambridge area, making it cheaper, easier and quicker for people to move around, and the new stations proposed will provide local people with the opportunity to experience that connectivity directly. In relation to walking, wheeling and cycling, it is acknowledged that without mitigation Cambourne South stations (as per Route Alignment 2) would perform better than Cambourne North stations (as per emerging preferences at NSC, Route Alignments 1 and 9), as Cambourne North is north of the A428. However, the reduced connectivity of Route Alignment 1 is capable of being mitigated by various factors including the provision of a new foot/cycle bridge over the A428. Future bus routes, cycling and walking/wheeling facilities and public transport in respect of Route Alignment 1 will be considered

and information presented at the statutory stage of consultation. Existing

population in the catchment area around Cambourne North will be slightly lower

#### **EWR Co Response Matter Raised** than at Cambourne South, but we would expect additional residential development to come forward around Cambourne North which will drive additional demand for EWR. There are understood to be fewer delivery risks associated with Cambourne North development than Cambourne South, suggesting that Cambourne North would be a slightly better option for housing and therefore all options with Cambourne North have been assigned Minor Improvement. See NSC Technical Report section 9 for more details on Cambourne North and South stations. St Neots stations also have slightly better connectivity to the proposed A428 Improvement Scheme as there would be a shorter access by road. The proposed development at either Cambourne North or Cambourne South is therefore likely to result in increased out-commuting, but the railway would provide the connectivity needed to do this. A new station at a Tempsford location would provide a connection with the ECML and is expected to enable housing growth in the area. However, EWR is committed to increasing prosperity and connectivity across the Oxford to Cambridge area, and therefore options to efficiently connect existing communities, such as St Neots, with EWR remains important and we will continue to develop proposals to enable easy accessibility for these communities, including through the provision of improved first mile / last mile connectivity, to the proposed network. EWR Co will work with Cambridgeshire County Council and Huntingdonshire District Council to enable new stations to be aligned with local transport plans, making it easy to walk, wheel or cycle or use public transport to get to and from the station. The plan is to maximise connectivity to stations which we believe will deliver community-wide benefits. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Impact on green spaces: in terms of access to green space, although a health assessment was not undertaken as part of the environmental considerations detailed within Appendix E of the NSC Technical Report, the landscape and visual section of that Appendix does confirm that Route Alignment 2 has 'notably less

#### **EWR Co Response Matter Raised** landscape impacts in comparison to the reference case (Route Alignment 8) due to not impacting on any landscape designations and on only a few woodlands, which was also the case with emerging preference Route Alignment 1. EWR Co will prepare a Code of Construction Practice or an equivalent document for the Project, which will explain the steps EWR Co will take to reduce or mitigate disruption to local people, communities and the environment during construction. Additionally, EWR Co will explain its approach to construction and operation of the railway and provide further details of potential health effects of this at the statutory consultation. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely adverse and beneficial environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts and likely beneficial effects. A full environmental statement will then be submitted as part of the development consent order application. The design solution will consider the temporary construction and longer-term environmental impacts of the Project, and EWR Co will seek to include specific measures within the design to reduce the impact of the Project on the surrounding environment during construction and operation. For example, measures to reduce visual intrusion may include the use of landscaping and screening, while railway noise may be mitigated by noise barriers and consideration of different track technologies and types of train that may be used in EWR's long-term train fleet. Visual impacts and light pollution: the NSC emerging preference Route Alignment 1 has notably fewer landscape impacts than both the reference case and Route Alignment 2, due to avoiding impacts upon landscape designations at Brickhill Country Park, the River Great Ouse valley and indirect impacts upon the character of Roxton Park. It is not correct that Route Alignment 2 would not require viaducts. In fact, Route Alignment 2 has greater visual impacts than the reference case (Route Alignment 8). It has very high visual impacts upon receptors at Chawston due to the A1 viaduct and routes closer to the settlements of Caxton, Caldecote, Great Cambourne, Lower Cambourne and Kingston than route

alignment options that serve a North Cambourne station (Route Alignments 1 and

#### Matter Raised

# eWR Co Response

A substantial number of respondents offered suggestions for this route alignment option. These included: general suggestions to seek alternate routes due to direct damage to road access, historical buildings, and farmland. Running the line through a tunnel at Clapham; Moving the station further from Tempsford. Moving the alignment away from homes and villages in the area; and suggestions to relocate route through the South of Bedford to avoid villages/environmental damage or build a tunnel at Clapham. There were also suggestions to relocate the route slightly further from villages/properties e.g., Caldecote, Barford, Roxton and Renhold. Suggestions to relocate route to utilize existing infrastructure of old rail beds and travel corridors to keep environmental impact to a minimum. Suggestions to relocate the route that goes through Cambourne North to run into Cambridge from the North to provide access to villages North of Cambridge. Suggestions of North stations to North stations or South Stations to South Stations e.g., Bedford – St Neots North – North Cambourne – North Cambridge.

9). It would also impact Eltisley, meaning that the overall visual impact from Route Alignment 1 would be less than Route Alignment 2. There is a potential for development at Cambourne North to have a visual impact on historic buildings such as Childerly Hall, due to the relatively elevated location of developable land within the existing rural landscape, but EWR Co does not expect that to be a major constraint to development. Alignment 2 would cross the Bourn Valley, cross a groundwater SPZ and result in high visual impacts. However, on balance it is considered that Alignment 2 represents a major improvement compared to the Reference Alignment. EWR Co recognises light pollution from both the construction and operation of a railway is an important issue for local communities. The potential effects of light pollution from the railway will be considered as EWR Co develops the designs for the Project. This will include considering the type, location and layout of lighting in construction compounds and work areas, stations, maintenance compounds and new access routes. Through the design EWR Co will seek to avoid impacts on "sensitive receptors", such as nearby residential areas or ecological habitats. Construction-related impacts on the environment (such as light and noise pollution) will be identified and managed, as far as reasonably practicable, by a CoCP or an equivalent document submitted alongside a DCO application. Compliance with the CoCP or equivalent document will be secured through the Requirements of the DCO itself.

In undertaking the environmental appraisal detailed in the NSC Technical Report, EWR Co has taken into account the impact that each route alignment option would have on the historic environment, agricultural land, and other environmental factors. The alignments have also been designed to maintain a reasonable distance from existing communities where feasible. Overall, Route Alignment 1 and its variant Route Alignment 1 (Tempsford variant), scored better than Route Alignment 9 to this regard, and was considered a major improvement over the Reference Case (Route Alignment 8). In terms of road access, EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoWs and private access roads at the statutory consultation.

# **Matter Raised EWR Co Response** Route Alignment 9 is considered a major improvement over the Reference Case in relation to the historic environment, as it is in close proximity to significantly fewer listed buildings and Scheduled Monuments than the Reference Case. However, Route Alignment 9 is considered neutral in comparison to the Reference Case based on impact on farm holdings. This is because more agricultural land is required for Route Alignment 9 than the Reference Case, although a smaller number of farm holdings will be impacted (39). Only Route Alignments 2 and 6 are considered a minor improvement on the Reference Case in relation to this assessment factor (14.1). The Route Alignment 1 (the NSC emerging preference alongside Alignment 9) represents a major improvement over the Reference Case, avoiding the complex heritage resource area of the Bourn Valley (by routing north of Cambourne) which provides additional improvement. In comparison to Route Alignment 9, Route Alignment 1 would likely impact 35 farm holdings. Tunnels: EWR Co continues to explore the use of tunnels for the scheme during the design process, but only considers them to be a practical option in specific areas where they can provide a potential solution for addressing constraints (like crossing roads, public access, environmentally sensitive areas). This is partly because they are more complex and expensive to build, operate and maintain than an above ground structure. Tunnels also require additional land for ventilation and exit provisions in case of emergency as well as pumping and drainage systems to deal with groundwater flows. Relocate route South of Bedford; build a tunnel: route options passing to the south of Bedford were considered before the selection of a preferred route option in 2020. Route Option E was selected in part because it would deliver higher transport user benefits by serving Bedford Midland and Bedford St Johns directly, providing convenient access to other rail services, transport modes, local homes and businesses and facilities such as Bedford Hospital. However, the environment through which it would pass and the environments affected by other route options were also considered. The area south and southeast of Bedford also

contains a significant number of sensitive or complex environmental constraints which would be difficult and expensive to overcome. EWR Co continues to explore the use of tunnels for the scheme during the design process, but only considers

#### **Matter Raised EWR Co Response** them to be a practical option in specific areas where they can provide a potential solution for addressing constraints (such as crossing roads, public access, environmentally sensitive areas). This is partly because they are more complex and expensive to build, operate and maintain than an above ground structure. Tunnels also require additional land for ventilation and exit provisions in case of emergency as well as pumping and drainage system to deal with groundwater flows. Move alignment away from homes and villages (e.g. Caldecote, Barford, Roxton and Renhold):tThe proximity of each proposed route alignment to residential properties and community facilities was assessed as part of the environmental appraisal (assessment factor 14.4), and the alignments have been designed to maintain a reasonable distance from existing communities where feasible. EWR Co also considers that the impacts of Route Alignment 9 in terms of Caldecote, Barford, Roxton, Renhold and other nearby settlements are already reflected in its assessment and that this does not change the relative performance of the route alignment. Route Alignment 9 would route approximately 3km north of Renhold and approximately 5km north of Great Barford. Route Alignments 1, 2 and 9 would pass further from Renhold, Great Barford and Roxton than route alignments options that pass further south (Route Alignment 2 and 8). Route Alignment 9 would also pass approximately 3km south of Knapwell. Route Alignments 1 and 9, the emerging preferred alignments at NSC, represent a minor improvement to the Reference Case (Route Alignment 8) for this assessment factor, with other route alignment options assessed as neutral. Potential impacts at Highfields Caldecote are being carefully reviewed and since the 2021 consultation the design has been amended to avoid having a direct impact on the Linden Homes development at All Angels Park. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignment 9 between Bedford and Tempsford Station, EWR Co has developed Alignment 1 (Tempsford variant). Alignment 1 (Tempsford variant), is a variation of Alignment 1, which deviates from Alignment 1 south of Colesden, then runs north of Roxton and serves a Tempsford station location. To the east of Tempsford

station, Alignment 1 (Tempsford variant), would then follow the proposed route of Alignment 9, which merges with Alignment 1 east of Little Barford and then runs

#### **Matter Raised EWR Co Response** to a station north of Cambourne. Alignment 1 (Tempsford variant), would significantly reduce and/or mitigate the potential impacts at Ravensden, Renhold, Great Barford and Roxton associated with Alignment 9. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Move station further from Tempsford: a key object of the Project is to enable housing and economic growth across the Oxford to Cambridge area. For this to be achieved, the newly proposed stations need to be in areas that are suitable for growth, and this formed the main basis by which the station location options were chosen. The station locations therefore need to be weighed up against several factors, including accessibility, and moving the stations further away from existing settlements would be contrary to this objective. Alternative station locations were also presented during consultation as part of Route Alignments 1, 2 and 6, which all featured a proposed station at St Neots instead of Tempsford. Paragraphs 9.6.17 - 9.6.53 of the Technical Report discuss the performance of the proposed station locations in relation to their contribution to enabling housing and economic growth (assessment factor 2). EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Existing infrastructure of old rail beds and travel corridors: as part of the Affordable Connections Project (ACP) EWR Co reviewed the potential for alignments approaching Bedford from the south and east, and in particular following the route of the decommissioned Varsity Line. Following this review it was concluded that the preferred route remained a route approaching Bedford from the north via Bedford Midland Mainline station. It is noted that the current design includes for a relocated Bedford St Johns station, however, EWR Co's

#### **Matter Raised EWR Co Response** preferred alignment approaches Bedford from the north. For these reasons EWR will not be revisiting the decision to select Route E or a northern approaching to Bedford. The ACP also reviewed the potential to follow the Varsity Line through Bedford and Cambridgeshire directly to Cambridge. Although a shorter route by not connecting to Cambourne or following the A428 road corridor this route was considered to deliver significantly less benefits than the current preferred routes. It was also considered that the only feasible route into Cambridge was connecting the existing railway corridors either south or north of Cambridge. EWR Co's emerging preferred options at NSC, Route Alignments 1 and 9, and the preferred alignment Route Alignment 1 (Tempsford variant), would run in a transport corridor alongside the northern side of the new and existing A428 west of Cambourne. Running EWR parallel to the A428 would allow the scheme to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to places. This could also help to reduce some adverse impacts of the scheme. Visual changes to the landscape would be concentrated in the A428 corridor rather than in areas not already subject to development, and there may be the opportunity to combine landscaping and other environmental mitigation measures. However, it would be difficult for the new railway to be located in close proximity to the other major roads because of sensitive environmental features and existing settlements along these routes. For instance, this would mean that selecting an alignment in these areas is likely to 'sandwich' settlements between these busy roads and the new railway, increasing the impacts on local communities from the combined infrastructure. Also following these roads would require significant diversions to the preferred route, 170ncreasingg journey time and costs. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Approach to Cambridge: regarding the suggestion of moving the alignment further north in order to approach Cambridge from that direction, full assessments of the five route options were completed in 2019, including understanding and using the feedback from the non-statutory consultation in early 2019, where the question of the direction of approach to Cambridge was specifically addressed. Details of these assessments can be found in the Preferred Route Option Report (East West

# **Matter Raised EWR Co Response** Rail, 2020). These assessments were carried out using the Assessment Factors that had been previously agreed with the DfT. The result of these assessments found that overall, Route Option E was the best performing and a southern approach to Cambridge was to be preferred. In the 2021 consultation, the question of approaching Cambridge from the north or south was the subject of a specific question. Responses to matters raised relating to the northern approach to Cambridge are provided in chapter 3 of the Consultation Feedback Report. Suggestion of north – north stations or south – south stations: EWR has assessed accessing Cambridge from the north, with consideration of an additional station on route such as at Northstowe/Oakington and still consider accessing Cambridge from the south as being the preferred option. For further details please refer to chapter 3 of the Consultation Feedback Report. Regarding suggestions on the location of Cambourne Station EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. Given the above EWR Co's preference would remain a route connecting Cambourne North and approaching Cambridge from the south, rather than a route running south to south or north to north. Brief response on Bedford southern approach: route options passing to the south of Bedford were considered before the selection of a preferred route option in 2020. Route Option E was selected in part because it would deliver higher transport user benefits by serving Bedford Midland and Bedford St Johns directly, providing convenient access to other rail services, transport modes, local homes and businesses and facilities such as Bedford Hospital. However, the environment through which it would pass and the environments affected by other route options were also considered. The area south and southeast of Bedford also contains a significant number of sensitive or complex environmental constraints

which would be difficult and expensive to overcome.

#### **Matter Raised**

A substantial number of respondents stated that Alignment 9 would have fewer negative impacts on homes and communities in the area. A considerable number of respondents remarked that this route alignment option would require the smallest number of properties to be demolished. Several respondents also stated that this alignment avoids listed buildings and Scheduled Monuments. A considerable number of respondents claimed that this alignment would have fewer negative impacts on local communities, in particular Caxton, Bourn, Hardwick, Colesden, Wilden and Comberton. Respondents stated that the rural nature of these communities makes them unsuitable for larger infrastructure projects, and so this route alignment option's distance from them would be positive. Many respondents also noted that locating the line being near Tempsford and Cambourne would be suitable, as those settlements are larger and are currently underserved by existing infrastructure.

#### **EWR Co Response**

Route less disruptive to residents/villages; fewer demolitions; local amenity spaces; less extensive construction required; removes risk of splitting communities (Bourn): whilst impacts to communities will occur to some extent for all route alignments, EWR Co is committed to ensuring so far as reasonably practicable that the Project is able to reduce and mitigate disruption during the planning, construction, and operation of the scheme. EWR Co has taken into account potential impacts to local communities and homes (Assessment Factor 14.4). It is correct that Route Alignment 9 would require the fewest number of demolitions of all route alignment options, with three properties requiring demolition. Route Alignment 9 would avoid impacts to a number of communities, including Caxton, Bourn, Abbotsley. While it would still impact some existing settlements and communities, EWR Co believes that following the existing travel corridor for a longer distance (as demonstrated by the emerging route alignments at NSC, Route Alignments 1 and 9) will reduce these impacts. Although Route Alignment 9 (along with Route Alignment 1) would require the longest track lengths, both route alignments have fewer structures associated with them compared to the Reference Case (Route Alignment 8). Since consultation, EWR Co has also been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Both the NSC emerging preferences Route Alignment 1 and 9 are considered to be a minor improvement on the Reference Case (Route Alignment 8) in relation to community impacts overall, as explained in the discussion of assessment factor 14.4 in Appendix E of the NSC Technical Report. This appraisal took into account the potential impacts on Great Barford, Hardwick, Knapwell, Roxton and Renhold. Route Alignment 9 would route approximately 3km north of Renhold and approximately 5km north of Great Barford. Route Alignments 1, 2 and 9 would pass further from Renhold, Great Barford and Roxton than route alignments options that pass further south (Route Alignment 2 and 8). Route Alignment 9 would also pass approximately 3km south of Knapwell. In terms of potential

#### **Matter Raised EWR Co Response** impacts to community and recreational facilities specifically, all options have the potential to result in amenity or isolation impacts, particularly during construction. All route alignments are therefore considered neutral in comparison to the Reference Case. Provision will be made during construction to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. EWR Co will prepare a Code of Construction Practice or an equivalent document for the Project, which will explain the steps that will be taken manage construction activity in a way that reduces disruption to local people, communities and the environment as far as is reasonably practicable. EWR Co's approach to construction and operation of the railway, and further details of potential effects of this, will be provided during our statutory consultation. Easier access to station; station location more suited to development: EWR Co has undertaken an assessment of the different station location options, which took into account active travel accessibility, land availability and suitability, contribution to enabling housing development, planning, and socio-economic factors. This assessment found that Cambourne North station is a more suitable location than Cambourne South as it performs better in relation to housing and economic development, as the land to the north of A428 is more suitable. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. EWR Co will work with local authorities and transport bodies to ensure public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our station designs.

EWR Co has noted responses in favour of Cambourne North station. As stated in sections 9.6.36 – 9.6.38 of the NSC Technical Report, any development around Cambourne North station can be expected to require fewer or less significant

#### **Matter Raised EWR Co Response** mitigation measures than around Cambourne South. As the design for Cambourne North station develops it will consider connectivity with communities within Cambourne and the potential Bourn Airfield development. Route serves a larger number of residents. It is not correct that Route Alignment 9 would serve a larger number of residents. Mode shift benefits was a consideration in assessment factor 2 (Transport User Benefits), including access to the stations. St Neots performs better in this regard, as it is situated closer to the town centre, and would serve a larger population that a station at Tempsford. The A428 separates Cambourne North from Cambourne, and therefore the accessibility is less than for Cambourne South. Although it is considered that this could be mitigated through the provision of a foot and cycle bridge, Route Alignment 9 is considered a minor worsening in this regard compared to the Reference Case (Route Alignment 8). Overall, alignments which serve the combination of St Neots and Cambourne South stations are a minor improvement to the Reference Case. Better connectivity – commuter connectivity; connectivity between population centres: the potential benefits of connectivity between settlements, including commuter connections, is not considered to differ between route alignment options. However, EWR Co agrees that locating our stations in the heart of existing communities offers the best opportunities not only to provide access into settlements along the railway, but also for those who live and work there to travel elsewhere without the need to use a private car. Centrally located stations will help to make EWR services an attractive and competitive choice with convenient access to homes and businesses. The route alignments that we have selected for consultation advance this aim by serving not only existing town centres, but also locating a new station on the East Coast Mainline in a location that will be able to provide connectivity to new development in this area too. The Assessment Factors for Short distance connectivity to support commuting travel into key employment hubs (current and future), Short distance passenger services, Rail passenger connectivity to existing main lines – the ease of interchange and Long distance passenger services, were all considered as non-differentiating Assessment Factors.

Impact on health / wellbeing Health and wellbeing impacts were not directly assessed at this stage, but potential impacts as a result of noise and air quality were assessed. Throughout the scheme development, EWR Co will consider a

## **Matter Raised EWR Co Response** range of matters including noise and vibration, air quality, potential impacts on Public Rights of Way (PRoWs) and land and property requirements with the aim of avoiding and then reducing impacts – and potential resulting impacts on health and quality of life – where possible through the design. The impacts of the final Route Alignment on the health and wellbeing of local communities will then be assessed in a dedicated chapter of the Preliminary Environmental Information Report (PEIR) published at the statutory consultation, and then subsequently in the Environmental Statement, which will detail the mitigation to be provided where appropriate. Avoids listed buildings and Scheduled Monuments: EWR Co has also taken into account potential impacts to the historic environment (Assessment Factor 14.9), identifying the number of listed buildings and Scheduled Monuments that would fall within close proximity to each route alignment option. Route Alignment 9 would pass within 250m of two Scheduled Monuments, and within 1km of 160 listed buildings, avoiding the complex heritage resource of the Bourn Valley. This represents a major improvement to the Reference Case (Route Alignment 8). In comparison, Route Alignment 1 (an emerging preferred alignment at NSC alongside Route Alignment 9) is near fewer listed buildings and SMs than the Reference Case. It avoids the complex heritage resource area of the Bourn Valley which provides additional improvement. The alignment passes through conservation areas at Harlton, Toft and Bedford. Alignment 1 is north of and in parallel to the A428 which reduces the likelihood of additional setting impacts to listed buildings and Scheduled Monuments. This also represents a major improvement to the Reference Case. Noise and light pollution: in terms of noise and vibration impacts, Route Alignment 9 is considered as neutral compared to the reference case, due to the similar number of dwellings potentially affected. As the Project develops, opportunities will be sought to avoid and reduce potential noise impacts through the design of the preferred route alignment, with mitigation measures such as noise barriers being embedded into the design where appropriate. EWR Co will also continue to explore ways of reducing noise and vibration impacts when EWR services are operational, such as considering the types of trains used and track technologies.

#### **EWR Co Response Matter Raised** Alignment 9 is considered neutral relative to the Reference Case and would impact Clapham East, Clapham Park Wood, Woodlands Park, Mowsbury, Ravensden North-west, Ravensden South, Ravensden Church End, Woodend Lane, Bedford Road, Roxton, Wintringham, Wintringham Hall, Cambourne North, Upper Cambourne, Highfields. Highfields Court, Little Eversden. With appropriate mitigation the noise impact on Ravensden Church End, Woodend Lane, Bedford Road, Wintringham Hall, Highfields, Highfields Court could be reduced. In comparison, Alignment 1 (an emerging preferred alignment at NSC alongside Route Alignment 9) is considered a minor improvement relative to the Reference Case and would impact Clapham East, Bedford East, Clapham Park Wood, Woodlands Park, Graze Hill, Ravensden North-west, Lower Grange / Sunderland Hill, Wilden, Chequers Hill North, Wilden East. Duck's Cross, South Brook, Colesden, Spinney Road, Chawston, Chawston East, Wintringham, Wintringham Hall, Cambourne North, Upper Cambourne, Highfields. Highfields Court, Little Eversden. With appropriate mitigation the noise impact on Graze Hill, Lower Grange / Sunderland Hill, Colesden, Spinney Road, Chawston, Wintringham Hall, Highfields and Highfields Court could be reduced. The potential effects of light pollution from the railway will be considered as EWR Co develops designs for the Project. This will include considering the location and layout of lighting in stations, maintenance compounds and new access routes. Through the design we will seek to avoid impacts on 'sensitive receptors', such as nearby residential areas or ecological habitats. The Code of Construction Practice (CoCP) or an equivalent document will also outline provisions aimed at reducing and mitigating temporary construction-related environmental impacts and disruption to local communities. A substantial number of respondents stated that the use of transport corridors, The ability for EWR to provide convenient connections to other transport modes such as the A428 and A421, are key factors in their support for this alignment. and projects formed a key part of the decision to select Route Option E as the Most of these respondents claimed that this would reduce the impacts of the line, preferred route option in 2020, and this continues to be the case. EWR Co will be containing air pollution and noise to a smaller area. Several respondents also continuing to monitor other transport projects across the area to ensure that our claimed that following this corridor would allow for greater connectivity and ease plans can facilitate this kind of connectivity where appropriate. Running EWR of access to the line for local residents. parallel to the A428 would allow the Project to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to places. This could also help to reduce some adverse impacts. Visual changes to the landscape would be concentrated in the A428 corridor rather than in areas not

already subject to development, and there may be the opportunity to combine

# Matter Raised EWR Co Response

landscaping and other environmental mitigation measures. Route Alignments 1 and 9, the emerging preferred alignments at NSC, would both run parallel and in close proximity to the A428 corridor for approximately 12km. Alignments which follow the route of the proposed A428 Black Cat Improvement Scheme are also more compatible with a station located to the north of Cambourne, neighbouring the A428. The A428 Black Cat improvement scheme is unable to provide provision within the DCO for another project. However, EWR Co is working closely with the A428 and other projects in the area to manage design and construction interfaces and explore opportunities between these projects, for example to mitigate environment impacts, encourage strategic growth and manage potential construction and traffic impacts. EWR Co notes that comments from respondents suggesting a shared travel corridor would reduce construction costs and time, and EWR Co will continue to explore potential opportunities for efficiencies with the A428 team.

A substantial number of respondents supported Alignment 8 due to its perceived lower impact on homes and communities along the route. In particular, several note that this route alignment option would not affect delivery of the new housing development at Bourn Airfield. Many respondents supported the new station at Tempsford, both to serve the community there but also to avoid the need for a station at St Neots South, which several say is unnecessary and would add to existing congestion in St Neots. Many supported this route alignment option because it would require the demolition of fewer homes than other proposals. Several respondents also cited lower negative impact on the rural nature of this area, including the villages of Wyboston, Chawston, Colesdon and Wilden, as key factors in their support.

Disruption to communities: due to the scale and nature of EWR, some impacts on communities are inevitable and all route alignment options would have some impact on local villages. EWR Co has taken this into account in the assessment of route alignment options (assessment factor 14.4). Alignment 8 would impact settlements, including Renhold and Abbotsley, and would pass close to Ravensden. EWR Co considers that impacts on communities could be reduced by routing EWR close to the existing travel corridor of the A428 (as is the case for Route Alignments 1, 2 and 9), as this would allow some adverse impacts to be concentrated in this corridor rather than in areas not already subject to development. Alignments 1 and 9, the emerging preferred alignments at NSC, require the fewest demolitions (4 and 3 respectively) and Route Alignment 8 requires a higher number (8)). Alignment 1 would also affect a fewer number of residential properties regarding noise and vibration impacts (assessment factor 14.14). Alignment 1 would require a smaller number of viaducts and bridges and lower number of earthworks than Alignment 8. EWR Co has considered the cost of construction and programme risk for each route alignment option (assessment factor 3, Capital costs). Complexity of construction is a factor in both cases, and this included consideration of geology and construction durations. Route Alignments 1 and 6 represent the best options with regard to capital cost, with the

#### **Matter Raised EWR Co Response** differences expected to be more than 10% lower than the cost of the Reference Case (Alignment 8). Programme risk was considered to be 'Neutral' for Alignment 1 (and the Reference Case Alignment 8). This is based on the engineering design presented at NSC, and the complexity of construction will be further scrutinised for the preferred alignment, Route Alignment 1 (Tempsford variant), as the design develops. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignments 8 and 9 between Bedford and Tempsford Station, EWR Co has developed Alignment 1 (Tempsford variant). Alignment 1 (Tempsford variant), is a variation of Alignment 1, which deviates from Alignment 1 south of Colesden, then runs north of Roxton and serves a Tempsford Station location. To the east of Tempsford Station, Alignment 1 (Tempsford variant), would then follow the proposed route of Alignment 9, which merges with Alignment 1 east of Little Barford and then runs to a station north of Cambourne. Alignment 1 (Tempsford variant), would significantly reduce and/or mitigate the potential impacts at Ravensden, Renhold and Roxton associated with Alignment 8, and Alignment 9. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. All route alignment options could have the potential to create some level of severance between communities and services, although measures will be put in place to mitigate such severance at later design stages. Route Alignment 8 is expected to cross 57 Public Rights of Way (PRoWs). Route Alignment 1 would cross 69 PRoWs. All PRoWs that would be crossed by the new railway are assumed either to be maintained in situ by a bridge or underpass or to be diverted. All options have the potential to result in amenity or isolation impacts, particularly during construction, and every shortlisted route alignment is therefore considered neutral in comparison to the Reference Case. During construction, EWR Co will aim to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. Arrangements for any diversions will involve discussion with appropriate parties at relevant stages with the aim of both mitigating disruption to the local community and enabling reasonable conditions for the progression of the works. The potential effects of light pollution from the railway will be considered

as EWR Co develops designs for the Project. This will include considering the

#### **Matter Raised EWR Co Response** location and layout of lighting in stations, maintenance compounds and new access routes. Through the design we will seek to avoid impacts on 'sensitive receptors', such as nearby residential areas or ecological habitats. The Code of Construction Practice (CoCP) or an equivalent document will also outline provisions aimed at reducing and mitigating temporary construction-related environmental impacts and disruption to local communities. EWR will undertake a Transport Assessment of impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. Outcomes of this will be reported in the Preliminary Environmental Information Report published at the statutory consultation and the Environmental Statement submitted alongside the DCO Application. The assessment will consider impact of construction on the road network, such as changes to existing traffic patterns because of predicted construction traffic and the suitability of roads, including those around Renhold as mentioned by respondents. Following consultation with all the relevant highway authority or other bodies, EWR will prepare a Traffic Management Plan (TMP) that includes measures aimed at maintaining safety for road users and reducing the impacts of construction traffic. The impact of vibration from construction activity and operation of the railway on specific building structures has not been specifically assessed at this stage. EWR Co will take this into account for future assessments, should these properties be in the assessment corridor. As set out in paragraph 4.3.26 of the Consultation Technical Report, EWR Co will seek ways to construct the works that minimise vibration but inevitably some activities, such as piling (the construction of deep foundations for structures), will be necessary. In such instances, EWR Co will ensure that working hours are appropriately limited and that surveys will be carried out to assess and manage the risk to homeowners where properties are likely to be affected. The impact of any changes to access will be assessed in the environmental impact assessment process and reported as part of the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES), with the aim of reducing adverse impacts of the scheme. In parallel, an Equality Impact Assessment will also be undertaken to capture potential impacts, both positive and negative, on protected characteristic groups (PCGs) as a result of the Project, and how these have been taken into account. EWR Co will also prepare a Code of

Construction Practice or an equivalent document for the Project, which will

# **EWR Co Response Matter Raised** explain the steps that will be taken to manage construction activity in a way that reduces disruption to local people, communities and the environment as far as is reasonably practicable. EWR Co's approach to construction and operation of the railway, and further details of potential effects of this, will be provided during our statutory consultation. Community severance: EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoW and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which reduces the impact on communities. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoWs and private access roads at the statutory consultation. Demolitions of homes: as set out in the Consultation Technical Report Appendix E, the Reference Case (Route Alignment 8) would require the demolition of eight properties, the majority of which are located around Broadway, Bourn, and an isolated property near Sandy. In comparison, Alignments 1 and 9, the emerging preferred alignments at NSC, would require the fewest demolitions (4 and 3 respectively) and therefore represent a minor improvement in this regard. Noise and light pollution: Alignment 1, an emerging preferred route alignment at NSC, would affect a fewer number of residential properties regarding noise and vibration impacts (assessment factor 14.13) than Alignment 8. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include assessments of disturbance to ecological receptors, and to local amenity and tranquillity from construction and operational lighting. This will be presented at the statutory consultation with a full environmental statement being submitted as part of the development consent order application.

# **Matter Raised EWR Co Response** Rural nature of the area: as stated in paragraph 9.6.90 of the NSC Technical Report, Route Alignment 8 would be likely to have relatively high adverse impacts upon landscape character, due to impacts on woodland and changes to the character of Brickhill Country Park, the River Great Ouse valley and Roxton Park. Settlements including residents in Renhold, Roxton and Crow End would be adversely impacted by Route Alignment 8. This is despite the lower impact Route Alignment 8 would have on Wyboston, Chawston, Colesden and Wilden. It would also have moderate impacts upon a number of settlements including those to the South of Cambourne; Caxton, Caldecote, Great Cambourne, Lower Cambourne and Kingston. Route Alignment 1, an emerging preferred alignment at NSC, is judged to be a minor improvement for this aspect. Alignment 8 would also have the largest plan area of viaducts and bridges. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Connectivity and active travel: EWR is a once in a generation opportunity for local communities. It will offer new, reliable, sustainable transport for people and businesses across the entire area. EWR will improve connectivity between communities including Cambridge, Cambourne, Tempsford, Bedford and beyond. In relation to walking and cycling, it is acknowledged that without mitigation Cambourne South stations (as per Route Alignment 8) would perform better than Cambourne North stations (as per emerging preferred alignments at NSC, Route Alignments 1 and 9), as Cambourne North is north of the A428. However, the reduced connectivity of Route Alignment 1 is capable of being mitigated by various factors including the provision of a new foot/cycle bridge over the A428. Future bus routes, cycling and walking facilities and public transport in respect of Route Alignment 1 will be considered and information presented at the statutory stage of consultation. Existing population in the catchment area around

Cambourne North will be slightly lower than at Cambourne South, but we would expect additional residential development to come forward around Cambourne North which will drive additional demand for EWR The proposed development at

# **Matter Raised EWR Co Response** either Cambourne North or Cambourne South is therefore likely to result in increased out-commuting, but the railway would provide the connectivity needed to do this. With regard to the station location options, and supporting active travel, the development of first mile/last mile strategies will be considered for the preferred option to mitigate such matters. This was therefore not considered to be a differentiating factor. EWR Co is committed to the encouragement of active travel – walking, wheeling and cycling – and is focused on integrating this with existing and future regional and local plans and planning strategies. EWR Co will ensure that public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our station designs. Tempsford Station: route alignment options that serve a St Neots station (Route Alignments 1, 2 and 6) perform better than those that serve a Tempsford station (Route Alignments 7, 8 and 9) with regard to transport user benefits. St Neots stations are closer to St Neots so are more accessible by bike and also provide a minor improvement for Public Transport (bus) users. In addition, St. Neots stations have better connectivity to the proposed A428 (shorter access road). Tempsford stations are closer to the Tempsford community, but St Neots stations are closer to a larger number of properties overall. EWR Co has considered the potential coalescence within the existing St Neots area. This is also considered to be a risk at Tempsford (i.e. with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk at St Neots as the Tempsford location is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. A new station at Tempsford location would provide a connection with the ECML and is expected to enable housing growth in the area. However, EWR is committed to increasing prosperity and connectivity across the Oxford to Cambridge area, and therefore options to efficiently connect existing communities, such as St Neots, with EWR remains important and we will continue to develop proposals to enable easy accessibility for these communities, including

through the provision of improved first mile / last mile connectivity, to the proposed network. EWR Co will work with Cambridgeshire County Council and

## **Matter Raised EWR Co Response** Huntingdonshire District Council to enable new stations to be aligned with local transport plans, making it easy to walk, cycle or use public transport to get to and from the station. The plan is to maximise connectivity to stations which we believe will deliver community-wide benefits. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. EWR Co will consider, alongside local councils and transport operators, how to provide the best method of connecting a Tempsford EWR station with communities. The objective will be to minimise impact on local communities while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. EWR will undertake a Transport Assessment of impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. Outcomes of this will be reported in the Preliminary Environmental Information Report published at the statutory consultation and the Environmental Statement submitted alongside the DCO Application. The assessment will consider impact of construction on the road network, such as changes to existing traffic patterns because of predicted construction traffic and the suitability of roads, including those around Renhold as mentioned by respondents. Following consultation with all the relevant highway authority or other bodies, EWR will prepare a Traffic Management Plan (TMP) that includes measures aimed at maintaining safety for road users and reducing the impacts of construction traffic. Impact on developments: EWR Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development. The design aims to reduce and mitigate the impacts on the developments at Bourn Airfield and Highfields Caldecote. Route Alignment 8 would not directly impact the

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development at Bourn Airfield. Route Alignments 1 and 9, the emerging preferred options at NSC, would only impact the north-eastern corner of the proposed Bourn Airfield development and it is considered that most of the development could be delivered unimpeded. This was therefore not considered to be a differentiating factor. For the second non-statutory consultation, EWR Co undertook high-level assessments of the following factors to understand the potential of each station location for housing and economic growth: • The availability and suitability for development of land within close proximity to potential station locations and any constraints (for instance environmental considerations such as flooding or heritage assets); • Placemaking opportunities and constraints; • Relevant information from local plans and related local planning documents; and • Socio-economic factors. The findings from these high-level assessments were summarised in Technical Report in paragraphs 9.6.21 - 9.6.53, with discussion of the Cambourne South and North station locations found in paragraphs 9.6.21 – 9.6.38. Overall, EWR Co considers alignments serving Cambourne North (including the emerging preferred options at NSC Route Alignments 1 and 9, and preferred route Alignment 1 (Tempsford variant)) as being likely to perform better in relation to housing and economic growth than those serving Cambourne South, including Route Alignment 8. Further analysis will be developed to support this and presented at Statutory Consultation. There will be significant planning work for each of the stations/local areas in the subsequent design stages in collaboration with local planning authorities. When designs for the proposed stations have been completed, these will be assessed against various factors. Further information will be provided at the statutory consultation.

A substantial number of respondents supported this alignment on the basis that it would have less negative impact on local the roads around the route compared to the other options. Many respondents specifically remarked that this route alignment option could relieve traffic and congestion in the area by providing alternative transport options for those who would otherwise drive. These respondents cited the roads leading from Cambourne and St Neots as being particularly congested and would therefore benefit from being relieved by increased train travel. Furthermore, many respondents claim that Alignment 1 would cut off or otherwise disrupt fewer high-volume roads, and fewer roads in general, than other route alignment options, which would positively impact both

Reducing congestion / encouraging modal shift by providing quicker and more reliable journeys over long distances, EWR aims to encourage modal shift from private vehicles to rail. It is intended that EWR will help to reduce road congestion in favour of a more sustainable form of transport and pre-emptively help to avoid increases which may otherwise be associated with new housing or economic development. EWR Co will also work collaboratively with Cambridgeshire County Council, the combined authority, and other transport operators (predominantly bus) to provide connectivity to the station via public transport and active travel. Traffic and the potential for congestion around stations is expected to be broadly

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traffic and ease of use for local residents. Some residents remarked that aligning with the existing transport corridors of the A1, the A421 and the A428 would reduce the general disruption which could arise from constructing the track.

similar for all station location options and will be further examined at the next stage of design. Impacts to the road network (assessment factor 14.16) will be reviewed in detail when more information is available during later stages of design development. This assessment factor was therefore not applied during the assessment of the shortlisted route alignments. When the final route alignment has been chosen, EWR Co will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. EWR Co will prepare a Traffic Management Plan (TMP) that includes measures aimed at maintaining safety for road users and reducing the impacts of construction traffic. The PEIR, which will be presented at statutory consultation, will include information regarding the baseline for transport, access and non-motorised users, together with a preliminary assessment of impacts. This will be developed and refined for the Environmental Statement that is submitted alongside the DCO application.

Support for station in St Neots – reduce congestion: a station closer to St Neots would also be more accessible by bicycle and public transport users and would serve a larger existing population because these route alignments are closer to a larger number of existing properties overall. St. Neots stations also have slightly better connectivity to the proposed A428 Improvement Scheme as there would be a shorter access by road. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Impacts on roads and PRoWs – cross fewer roads; crossing A421 and Bourn Broadway, impacts fewer footpaths and cycleways (including A421, Bourn Broadway) As mentioned in section 4.2.2 of the NSC Technical Report, EWR Co has considered the impact of the Project on existing highways, local roads, PRoWs and private access roads as part of the design and assessment of all route alignment options. Although Route Alignment 1 would be expected to cross 69 PRoW, it

# **Matter Raised EWR Co Response** would not cross the A421 and avoids impacts to properties around Broadway. Regardless, EWR Co is seeking to maintain existing highway connections, including PRoWs, wherever feasible. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. Fewer viaducts: although Route Alignment 1 would still require some viaducts, it is expected to require fewer bridge and viaduct structures than other alignments. Since consultation, EWR Co has also been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Support for Cambourne North – A1198 impact, active travel (walking, wheeling, cycling): the route alignments with a station at Cambourne North (Route Alignments 1 and 9) would move the station and alignment away from the A1198, west of Cambourne, and therefore reduce potential impacts, which could be developed around Cambourne South. EWR Co has taken into account the accessibility of all potential station locations. Although a Cambourne North station would be separated from Cambourne by the A428, it is believed that this could be mitigated by an accessible foot and cycle bridge over the A428. Station designs for Cambourne North will include provision for public transport interchange and active travel facilities and routes to maintain connectivity with neighbouring villages and communities. The development of first mile/last mile strategies will also be considered for the preferred Alignment 1 (Tempsford variant), to mitigate such matters.

### **Matter Raised EWR Co Response** Traffic management – construction vehicles: EWR Co will endeavour to manage construction activity accordingly to reduce adverse impacts, such as by choosing suitable construction routes and maintaining access (or providing temporary diversions) where possible. The measures EWR Co will use to reduce impacts of construction traffic will be outlined in a Traffic Management Plan (TMP), prepared in consultation with relevant highway authorities and stakeholders. The TMP would include measures aimed at maintaining safety for road users and reducing the impacts of construction traffic, such as setting out the timing of traffic management measures. Farm access / wildlife tunnels: impacts on road access to properties – including agricultural property – is a matter addressed in subsequent design phases and does not assist in differentiating between route alignments. EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location. EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. Other crossing types may be required including the use of accessible underbridges and underpasses (for example, a greened underbridge that encourages species such as deer and badger to safely cross beneath the railway). EWR Co will seek to ensure that permanent access routes are sensitively aligned and integrated within the landscape and, wherever possible, seek to integrate the engineering and environmental requirements into a single feature. A substantial number of respondents voiced concern that Alignment 8 would As mentioned in section 4.2.2 of the Consultation Technical Report, EWR Co has negatively impact roads and paths in the area, as well as their access to amenity considered the impact of the Project on existing highways, Public Rights of Way and recreation. Many respondents remarked that construction of this route (PRoWs) and private access roads as part of the design and assessment of route alignment option would cause disruption to roads in an area that is already alignment options. This was through the consideration of community impacts, and congested, with additional traffic on the road due to construction traffic adding to potential severance of communities. Between 51 and 77 PRoW are crossed with bottlenecks from St Neots and Cambourne. Moreover, several state that these all options, with Route Alignment 8 being expected to cross 57 PRoW, with three roads, particularly those around Renhold, are unsuitable for larger vehicles. Many nationally or regionally designated PRoWs crossed or impacted. However, all respondents expressed concern about the loss of historic public rights of way, crossed PRoWs are assumed to be maintained or diverted for all route alignments. particularly recreational footpaths, which could be severed by the line. Therefore, this is not a differentiating factor. EWR Co is seeking to maintain

existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location, EWR

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Co will ensure that a suitable alternative is available which reduces the impact on communities. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoWs and private access roads at the statutory consultation. EWR will undertake a Transport Assessment of impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. Outcomes of this will be reported in the Preliminary Environmental Information Report published at the statutory consultation and the Environmental Statement submitted alongside the DCO Application. The assessment will consider impact of construction on the road network, such as changes to existing traffic patterns because of predicted construction traffic and the suitability of roads, including those around Renhold as mentioned by respondents. Following consultation with all the relevant highway authority or other bodies, EWR will prepare a Traffic Management Plan (TMP) that includes measures aimed at maintaining safety for road users and reducing the impacts of construction traffic. In relation to the accessibility of station locations, one of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. The level of traffic and the potential for congestion around stations is expected to be the same for all station location options and will be further examined at the next stage of design. EWR Co will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered.

Access to amenities and recreational facilities, such as shops, pubs, restaurants and sports facilities is a concern for many respondents. These respondents also noted that there is currently no information about how Public Rights of Way (PRoW) affected by the proposals will be kept open. Some respondents commented on particular local amenities that could be impacted if Alignment 1 is selected. These include: • Listed buildings and historic houses such as those at Graze Hill Lane. • Restaurants and pubs across the alignment. • Woodland and walking routes along the alignment. • Community allotments near the Bourn Airfield development, Brickhill Country Park, Fortitude fitness centre; and • Access

Impacts to community facilities, including access routes: EWR Co is considering potential impacts on the community and how to reduce or mitigate disruption to local people, communities and the environment and how to avoid significant adverse impacts on health and quality of life. The company is considering a range of matters including sound, noise and vibration, air quality, as well as potential impacts on PRoWs and land and property requirements. As discussed in the evaluation of assessment factor 14.4 (Community) in Appendix E of the Non-Statutory Consultation Report, all options have the potential to result in amenity

## **Matter Raised EWR Co Response** between towns and villages along the alignment, particularly without any level or isolation impacts to community and recreational facilities, particularly during crossings proposed. construction. All route alignments are therefore considered neutral in comparison to the Reference Case in this regard. The potential for impacts on the Disabilities Trust care home on Graze Hill has also been taken into account, and as our design develops EWR Co will work with the trust to mitigate impacts. Provision will be made during construction to maintain connections that are intended to be retained after the Project is completed, even if they have to be temporarily diverted, including to key community facilities. As stated in paragraph 9.6.106 of the NSC Technical Report, Route Alignment 1 will avoid impacts to the Brickhill Country Park, and Brace Dein Allotments near Bourn Airfield. The Fortitude fitness centre in Highfields Caldecote would be directly impacted by the NSC emerging preferred Route Alignments 1 and Alignment 9, and EWR Co's preferred alignment Route Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. EWR Co will work with the centre to mitigate impacts and further details will be provided at statutory consultation. Based on the designs presented at NSC, we do not anticipate directly impacting Clapham Park. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts and will continue to consider how we can best avoid impacts on Clapham Park as we develop the design. EWR Co is seeking to maintain existing highway connections and existing bus routes wherever feasible. Where it is not feasible to retain bus routes on their current routes, EWR Co will ensure that a suitable alternative is available which

minimises the impact on users. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoWs and private access roads at the statutory consultation. Bourn Airfield development EWR Co has taken into account effects on committed developments along each route alignment option (assessment factor 14.14, Planning). Although Route Alignments 1 and 9 would impact the development at Bourn Airfield, they would impact only the northeast corner of the development and it is anticipated that most of the development could be delivered unimpeded. This was not an issue that was a differentiating factor in the assessment as all route alignments were considered neutral in relation to their effects on committed development. Impact on PRoWs, including Ravensden Circular, Wimpole & Harcamlow Way; level crossings. Crossing PRoWs is inevitable for all

# **Matter Raised EWR Co Response** alignments. All PRoWs that would be crossed by the new railway are assumed either to be maintained in situ by a bridge or underpass or to be diverted. This is expected to result in a neutral impact for all route alignment options and so is not a differentiating factor. As stated in paragraph 3.4.2 of the NSC Technical Report, EWR Co is not proposing any new level crossings due to safety concerns, and to ensure compliance with the ORR guidance. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities, including maintaining access to key facilities. The impact of any changes to access will be reported as part of the PEIR and Environmental Statement, with the aim of reducing adverse impacts of the scheme. In parallel, an Equality Impact Assessment will also be undertaken to capture potential impacts, both positive and negative, on protected characteristic groups (PCGs) as a result of the Project, and how these have been taken into account. Heritage and listed buildings (Ravensden Grange, Graze Hill Lane): EWR Co has considered the impact of the route alignments on built heritage and the historic landscape as part of assessment factor 14.9, Historic Environment. Overall, Route Alignment 1 presents a major improvement compared to the Reference Case (Route Alignment 8). This is because Route Alignment 1 is in close proximity to significantly fewer listed buildings and Scheduled Monuments and avoids the complex heritage resource area of the Bourn Valley. Route Alignment 1's proximity to the A428 also reduces the likelihood of additional setting impacts to listed buildings and Scheduled Monuments in the vicinity, as fewer assets would be impacted. Based on the designs presented at NSC, we do not anticipate directly impacting Ravensden grange or any listed buildings on Graze Hill Lane. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts and will continue to consider how we can best avoid impacts on these buildings as we develop the design. As far as is reasonably practicable EWR Co will aim to avoid harm to the setting of designated heritage assets, prioritising those of the highest sensitivity such as Scheduled Monuments, Grade I and Grade II listed buildings and parks and gardens. In order to do this, early identification and surveys of those assets most

likely to be affected will be carried out so the scheme can be designed to avoid

### **EWR Co Response Matter Raised** these and where this is not possible, incorporate appropriate mitigation measures into the design. EWR Co will develop a PEIR to describe the likely adverse and beneficial environmental effects of the proposals, which will include information regarding the historic environment baseline, and a preliminary construction and operation assessment of direct impacts and the setting of heritage assets, buried archaeology and historic landscapes. Zone of Theoretical Visibility will be produced to inform extent of change to settings. The PEIR will be presented at the statutory consultation with a full Environmental Statement being submitted as part of the DCO application. Woodland: EWR Co is following the environmental mitigation hierarchy by seeking to avoid significant adverse effects on woodland and ancient woodland and where this isn't possible, seeking to reduce and mitigate impacts and if necessary, providing compensation where this is feasible. At this stage the Project is primarily focused on trying to avoid and reduce impact, by making decisions that help 'design out' the potential for environmental impacts. So, for example, as a result, all alignments have avoided direct impacts on key national features including known ancient woodland. The Project has committed to delivering biodiversity net gain which requires that habitats for wildlife are enhanced and left in a measurably better state than they were pre-development which includes woodland. EWR Co recognises the importance of biodiversity and protecting the habitats of local wildlife including priority habitats such as woodland and orchards as well as parks and greenspaces. As part of EWR Co's commitment to changing the environment for the better, the company is thinking carefully about these habitats when designing the railway EWR Co will seek to avoid, reduce and mitigate any potential adverse impacts on orchards, as far as is reasonable practicable. Building sufficient car and cycle parking at Tempsford Station. Suggestion to Integrate proposed bike and footbridges over A428 into EWR design. Suggestion Integration of active travel links / active travel (walking, wheeling and cycling) links that additional bus services should be provided between the Cambourne North between Cambourne and Cambourne North station, including cycle / pedestrian station and Cambridge, including connecting with the proposed GCP Busway bridge over A428: one of EWR's core priorities is to increase connectivity across scheme. Suggestion that active travel links (cycle lanes, pedestrian crossings) are the Oxford to Cambridge area. This includes consideration of local connectivity, provided between Cambourne and Cambourne North station, including a bus services and customer experience while travelling to EWR stations within our cycle/pedestrian bridge over the A428 station design work. EWR Co will consider options for connecting the stations to

# Matter Raised EWR Co Response

Coordinating with the development of the Caxton and Black Cat roundabouts, as well as the planned A428 upgrades. Suggestion of alternative route South of A428 and A421 and preference for routes 6 and 8. Integrated approach with the A428 proposals will help to create a significant strategic growth opportunity. Suggestion to work closely with A428 Black Cat improvement scheme to leave passive provision for EWR. Comment on design of A428 – outside of scope. Shared travel corridor would provide environmental benefits. Shared travel corridor would reduce construction costs and time. Suggestion to join up with future transport proposals of various partners along the line of the A428 route. Suggestion to work with A428 project to deliver digitally enabled corridor. Integrated approach with A428 proposals would reduce impacts on residents along the corridor. Request from NFU to share survey data between Highways England and EWR to reduce

duplication of survey locations and impacts on land. General comment in support

existing settlements, transport networks and sustainable transport modes including the provision of active travels links to Tempsford and Cambourne stations as part of our preparation for the statutory consultation. EWR Co will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. At Cambourne North, station designs will include provision for public transport interchange and active travel facilities, in addition to routes to maintain connectivity with neighbouring villages and communities. This includes a potential cycle and footbridge over the A428. It is also expected that any interfaces with a guided busway scheme serving Cambourne could be appropriately managed.

Lines on alternative route South of A428 and A421: route options passing to the south of Bedford were considered before the selection of a preferred route option in 2020. Route Option E was selected in part because it would deliver higher transport user benefits by serving Bedford Midland and Bedford St Johns directly, providing convenient access to other rail services, transport modes, local homes and businesses and facilities such as Bedford Hospital. However, the environment through which it would pass and the environments affected by other Route Options were also considered. EWR Co considers that a route alignment following Route Option E and passing through Bedford town centre remains preferable. All of the alignments proposed take this route, so it is not a differentiating factor between them. Route Alignments 6 and 8 running south of the A428 were considered within the NSC alignment shortlist and did not perform as well as Alignments 1 and 9, the emerging preferred alignments at NSC, which ran to the north of the A428. Table 9.2 of the NSC Technical Report summarises each route alignment's performance against the Assessment Factors. The Alignments 1 and 9 running North of the A428 reduces the likelihood of additional setting impacts to Listed Buildings and SMs in the vicinity as fewer assets would be impacted. As discussed a station north of Cambourne is the preferred location which would require alignments running south of the A428 to then cross the road nearer Cambourne.

of shared travel corridor.

### **EWR Co Response Matter Raised** Integrated approach with A428 proposals; passive provision for EWR in A428 scheme; design – outside of scope; share survey data; digitally enabled corridor: with regard to integration and coordination with the A428 Black Cat improvement scheme, the A428 project is unable to provide provision within the DCO for another project. However, EWR Co is working with the A428 project team, National Highways and the Department for Transport (DfT) to understand and discuss the A428 design and review the extent to which construction, operational and environmental opportunities can be created and aligned by working together. So far as possible, EWR Co is also seeking to make use of data from the A428 scheme and share survey information and data with stakeholders including National Highways wherever practicable. Lines on travel corridor: running EWR parallel to the A428 would allow the scheme to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to places. This will assist us to develop our digital strategy and systems with consideration of the A428 and other key transport systems and operators. Specifically at stations EWR Co will continue working with other organisations, including bus operators, to improve facilities, such as provision of onward travel information. This could also help to reduce some adverse impacts of the scheme. Visual changes to the landscape would be concentrated in the A428 corridor rather than in areas not already subject to development, and there may be the opportunity to combine landscaping and other environmental mitigation measures. EWR Co will be continuing to monitor other transport projects across the area to ensure that our plans can facilitate this where appropriate. All of the alignments in Section D that have been considered would be able to accommodate this complementary approach and in order to ensure that the Project can realise the full benefits. Many respondents also expressed support for Alignment 6 on the basis of potential positive impacts on roads and paths in the area. In particular, many Road network: Route Alignment 6 crosses the A1, as well as other highways, including new works associated with the A428 Black Cat improvement scheme. As respondents suggested that improved rail connectivity for St Neots would have a positive impact on congested roads in that area. Several respondents also such, it does have potential to impact travellers. As described in the Consultation commented that this route alignment option would not cross the A428, meaning Technical Report (East West Rail, 2021), Section 9.6.13, modal shift is a that these roads would not face additional strain, and so are supportive of this Consideration under the Transport User Benefits assessment factor, which has been applied to select the preferred alignment in Section D. It is correctly noted alignment.

# **EWR Co Response Matter Raised** that the A428 separates the proposed Cambourne North Station from Cambourne. Through the design of the station and accesses in the next stage, we will consider accessibility for active travel options, which may include provision of new foot and cycle crossings over the A428. EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. Regarding connections for Cambourne South, it is noted that station access would be reliant on the single carriageway A1198 and it is considered that the A428, used for access to Cambourne North station, would provide a more suitable road for station access. Active travel (walking, wheeling and cycling): EWR Co is actively considering the end-to-end journey, including how stations can facilitate easy and simple connectivity for people. Providing easy to use, suitable walking routes to the station is part of how EWR Co is promoting active travel – walking, wheeling and cycling – along with working with local authorities to understand how it can support local plans and improvements for footpaths around stations. Where equestrian access may be affected by development of the railway alternate options will be shared through user groups and consultation for comments to be considered. EWR Co will ensure that public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our station designs. However, the design for Route Alignment 6 does not include provision for an extension of Comberton Greenway. As respondents highlight, in relation to existing populations, St Neots station (Route Alignments 1, 2 and 6) options perform better than Tempsford station (Route alignments 8 and 9) options. St Neots stations are closer to St Neots and thus

more accessible by active travel modes and also provide a minor improvement for Public Transport (bus) users as closer to St Neots so improved journey times. This does offer the opportunity for mode shift for existing travellers. Both St Neots and

Tempsford stations would provide a rail connection to the existing St Neots

### **EWR Co Response Matter Raised** station. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Public Rights of Way (PRoWs): as noted elsewhere, while all route alignment options would affect PRoWs and roads, it is anticipated that these will be reprovided or diverted as part of the works for EWR. In comparison, 61 PRoWs would be crossed in Route Alignment 6, compared to 57 in the Reference Case (Route Alignment 8) and 69 and 64 by the emerging preferred alignments at NSC, Route Alignments 1 and 9, respectively. It is also noted that the Reference Case (Route Alignment 8) is substantially closer to Renhold than Route Alignment 6, or the Preferred Route Alignment 1 (Tempsford variant). In terms of existing highways, footpaths and bridleways being impacted (including crossed) – see response in the same 'Roads and Footpaths' section of 'Concern'. Disruption to villages With regard to disruption of access to Bedford and potential impacts on North Bedfordshire Villages, Route Alignment 6 performs the same as Route Alignment 1, an emerging preferred option at NSC, as they all follow the same alignment through Bedfordshire. Alignment 6 would be expected to have less potential impacts than the Reference Case (Route Alignment 8) at the villages of at Ravensden, Renhold and Roxton. Many respondents were concerned about the cost and feasibility of the intersection with the A428, either by tunnel or road bridge, remarking that it Cost (including compensation, interfaces with other schemes, utility would make the alignment prohibitively expensive. These respondents were also infrastructure): EWR Co has considered all capital costs as part of assessment concerned about the mitigation, compensation, and liability costs of cutting factor 3, including costs associated with the works required to integrate with the through farms, individual homes, and development land. Some of these A428 Improvement Scheme, costs for purchasing properties and land, including respondents believed that if Alignment 1 is selected, it is likely to result in a any compensation, costs of the required structures along the route alignments substantial and currently unacknowledged compensation liability, citing the including bridges and tunnels, as well as pipeline crossings. The cost of providing compensation costs to developers, homeowners, and businesses. Several other new stations is included in the assessment of Route Alignments. The same

#### **Matter Raised**

respondents were concerned about the overall cost of this alignment being high, especially during a time of economic difficulty, citing the longer route and more complex construction such as the tunnelling, bridges, and mitigation required to navigate existing infrastructure. In particular, respondents mentioned the difficulties of traversing the M11. Effects on future and planned development is a concern for some respondents who believe that Alignment 1 would significantly impact planned locations, such as Bourn Airfield and Wintringham, and result in high compensation costs. A few other respondents questioned if this alignment option is dependent on new development north of the A428, which is outside of the current local plan. Some respondents mentioned the cost of moving other infrastructure, such as pipelines, that would be associated with Alignment 1. A few other respondents referred to the maintenance costs that would be needed to keep viaducts and other large infrastructure clean and free from graffiti. A few respondents were of the opinion that a station at North Cambourne would serve fewer commuters and so is less economical. Respondents also mentioned the additional cost of providing the new station.

### **EWR Co Response**

approach to cost for all Route Alignments has been taken in assessing their relative performance and there is no reason to assume that Route Alignment 1 would result in unidentified costs. Professional fees for Route Alignment 1 are a very small proportion of overall cost and unlikely to be materially different between Route Alignments. At this stage of the design and with the current level of detail available, all Route Alignments are considered to be neutral in terms of operation costs. In this regard, Route Alignments 1 and 6 perform best under assessment factor 3. They are also expected to provide the greatest potential for capital cost saving when value management is carried out compared to the Reference Case (Route Alignment 8), with all other Route Alignment options assessed as neutral. The capital costs calculated for Route Alignments 1 and 6 are expected to be more than 10% lower than the cost of the Reference Case (Route Alignment 8). Route Alignment 1 performs best among the route alignments in relation to cost, which favours its selection an Emerging Preferred Route Alignment at NSC. The wider economic situation does not favour one route alignment more than any other. The EWR alignment joins the existing Kings Cross Line to the west of the M11. Consequentially no works are planned which would impact the operation of the M11. Regarding concerns of crossing infrastructure, such as pipelines, this has been taken into account in the assessment of capital costs. Regarding utilities and associated equipment EWR Co is in discussion with the relevant providers to determine either a diversion or protective measures for their services.

Energy consumption as a result of terrain: the cost of the energy that would be required to run EWR services on each route alignment is considered as part of assessment factor 4 (operation costs). At this stage of the design and with the current level of detail available, all route alignments are considered to be neutral in terms of operation costs. In any process of design, solutions to manage environmental impacts and cost mean that opportunities are sought to reduce the number of structures and heights of embankments and bridges. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor

# **Matter Raised EWR Co Response** diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of a future public consultation. EWR Co is committed to running a sustainable railway in the long term, with an ambition to be a net zero carbon railway. This includes the use of sustainable traction power in the long term. Information about EWR Co's approach to traction power will be presented as part of the PEIR at statutory consultation. Effects on future and planned development, dependence on development north of A428: EWR Co has considered effects on committed developments along each route alignment option (assessment factor 14.14, Planning). Although Route Alignments 1 and 9 would impact the development at Bourn Airfield, they would impact only the northeast corner of the development and it is anticipated that most of the development could be delivered unimpeded. This was not an issue that changed any differentiating factors in the assessment, as such all route alignments were considered neutral, as explained in Appendix E of the NSC Technical Report. Route Alignment 1 does not directly impact the Wintringham development. EWR Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development. Maintenance costs and graffiti: precise maintenance costs have not been calculated at this stage and therefore all route alignment options have been scored neutral (under assessment factor 5, Overall affordability). However, there

is not expected to be a significant difference for maintenance costs, including for

## **EWR Co Response Matter Raised** the removal of graffiti, between the route alignments and maintenance costs alone are therefore not considered a differentiating factor. North Cambourne – serving fewer passengers: one of the key objectives of EWR is to enable sustainable housing and economic growth. The proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, as well as helping to ease some of the upwards pressure on the housing market. Consideration has been made of the accessibility to suitable road infrastructure, potential demand and viability of development in choosing station locations. While the existing population in the catchment area around Cambourne North will be slightly lower than at Cambourne South, we would expect additional residential development to come forward around Cambourne North which will drive additional demand for EWR. Many respondents were concerned about the negative impact of this alignment on homes along the route. Some expressed concern that this alignment would Impact on homes: EWR Co has taken into account the direct impact on properties decrease the desirability of their area for potential future residents. Others were along each route alignment option. Of all shortlisted route alignments, Alignment concerned that the rail line would encourage further development in their villages. 6 would pass within 500m of 1,224 homes and would require the demolition of nine properties, performing worse than Route Alignment 1, an emerging preferred option at NSC, in both regards. Where land is acquired or proposed to be acquired, the Compensation Code sets out the circumstances in which compensation is payable, EWR Co provided a guide to compulsory purchase compensation. Compensation is also available for properties in proximity to the new railway which may be affected by various physical factors of the operation of the railway once it is in use, this is referred to as Part 1 compensation for which we included a guide on the website – Guide to Part 1 claims. Also, EWR Co will be introducing a Proposed Need to Sell Property Scheme at preferred route announcement to assist people with a pressing need to sell but are unable to because of the Project. EWR Co consulted on a Proposed Need to Sell Property Scheme at the same time as the main non-statutory consultation and the details for the Guide to the Proposed Need to Sell Property Scheme are available here. EWR Co will discuss the detailed design of the scheme with the landowners when the land requirements are known (they will be known by the statutory consultation) with the landowners to seek to reduce and mitigate the impact.

# Matter Raised

Many respondents believe that Alignment 2 would be the best of the route alignment options for the local environment but provided no further explanation. A small number of these respondents raised specific areas of environmental concern which this alignment would avoid, such as the Great Ouse flood plain and the other locations referred to below. Several respondents identified mitigation measures, such as running through cuttings rather than viaducts, as conducive to lower negative environmental impact. Many other respondents stated that these cuttings would also reduce the noise impact of the alignment. Respondents also claimed that this alignment is shorter than others, and hence more direct, which would similarly reduce the noise impact overall. A few respondents also commented that this alignment would avoid damage to woodlands at the Little and Great Early Groves, as well as Highfield Wood. Many respondents also stated that this alignment would have fewer negative impacts on priority habitats in the area in comparison to the other proposed alignments. A small number also

### **EWR Co Response**

Further Developments: stimulating economic growth, housing and employment across the Oxford Cambridge area is a key Project objective. Therefore, understanding how station location options might influence the development potential of their surrounding areas has been taken into account when comparing the route alignment options. The potential impacts of future housing growth on existing settlements will be assessed and consulted upon by Local Planning Authorities in preparing Local Plans and determining applications for planning permission. EWR Co has considered the feedback from the 2021 consultation and concluded that the majority of Alignment 1 provides a better solution than the other routes presented for Section D between Clapham Green and The Eversdens. However, EWR Co has identified a localised variation of this route which incorporates part of Alignment 9 to serve a potential East Coast Mainline station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

Impact on local environment: when considering general environmental impacts, both Route Alignment 2 and Route Alignment 1, an emerging preference at NSC, are judged to be a major improvement in comparison to the Reference Case (Route Alignment 8).

## Matter Raised EWR Co Response

commented that this alignment would have a less detrimental effect on air quality in the area, due again to the use of cuttings.

Climate Change: as the Engineering Long Section Drawings provided at NSC show the highest rail level of Route Alignment 2 would be approximately 75m, whereas Route Alignment 1 (an emerging preferred option at NSC) and 8 would have peak levels of approximately 84.5m and 71m, respectively. The PEIR will include information regarding the methodology used to assess the significance of the carbon emissions associated with the project, the carbon management and reduction approaches already in place, and those which will be used during construction and operation. This will include carbon emissions from the trains expected to use the route. The PEIR will be presented at the statutory consultation. A full Environmental Statement will then be submitted as part of the DCO application and will include a full whole life assessment of carbon emissions. On the topic of climate, Route Alignment 2 constitutes a major improvement when comparing to the Reference Case (Alignment 8). Although the track length would be longer (leading to a slight increase in greenhouse gases), the alignment requires far less earthworks and therefore lower greenhouse gases would be produced in association with this. Overall, Route Alignment 2 results in a lower carbon footprint (approximately a 20% saving) in comparison to the Reference Case. Route Alignment 1, an emerging preferred option at NSC, results in a 32% saving and is therefore a greater improvement. Alignments 1 and 2 are judged to be a major improvement in comparison to the Reference Case (Route Alignment 8) for the 'Climate' assessment factor.

Cuttings/Embankment/Soil removal: the capital costs section of the NSC Technical Report Appendix E shows that Route Alignment 2 represents a minor improvement in terms of programme risk when compared to the Reference Case, on the basis that the route would involve less earthworks (i.e., cuttings and embankments) and less structural work. Contrary to the respondents' statement Route Alignment 2 still requires the construction of embankments. However, the overall judgement based on Supporting Considerations was neutral, whereas Route Alignment 1 (an emerging preferred option at NSC) was judged to represent a minor improvement, due to the fact that it's up front capital costs were more than 10% lower than the Reference Case (Route Alignment 8). No tunnels have been assumed for Route Alignment 2. It is accepted that placing the railway in cuttings may reduce noise, and visual impacts for all routes and the assessment

## **Matter Raised EWR Co Response** undertaken for NSC considered whether the railway was in cutting or on embankment. As the design development continues, further consideration will be given to opportunities to mitigate environmental impacts through the design of the railway. Examples of these are set out in Appendix D of the NSC Technical Report. At a later stage in the planning and development process, EWR Co will develop a noise policy, which will set out a plan designed to establish and mitigate noise and vibration to avoid any significant adverse impacts on health and quality of life. EWR Co recognises concerns about the impact of noise and vibration and is committed to considering measures that will reduce noise and vibration. Comprehensive assessments will be carried out and will use industry-leading computer modelling, which can incorporate information on local topography and geology to simulate potential noise and vibration impacts along the whole route as part of the assessments on any mitigations required. Route Alignments 1 and 2 were both judged to be a major improvement in comparison to the Reference Case (Route Alignment 8) for the Environment assessment factor Impacts on farms Alignment 2 is likely to impact approximately 40 holdings (based on available information), of which two would be likely to experience a major adverse impact from the construction of the scheme. Based on the length of Alignment 2, it would require a broadly similar amount of agricultural land as the Reference Case. This option is considered to be a minor improvement overall. Route Alignment 1, an emerging preferred option at NSC, is considered to be neutral on agriculture, forestry, and soils when compared to the Reference Case (Route Alignment 8). The potential interaction of the railway with agricultural land and holdings has formed an important part of the process of not only designing potential alignments, but also the earlier selection of a preferred route option in 2020. The selected route option and the route alignments which were presented during the 2021 consultation have aimed to reduce the direct impact on the best grade agricultural land, although all of the alignments would have an impact to a greater or lesser degree. This is complemented by EWR Co's on-going engagement with potentially impacted farmers. We have been holding Farm Business Interviews with them which are intended to allow them to tell us about how their businesses might be affected by the alignments presented at the 2021 consultation. EWR Co will

engage further with potentially directly impacted landowners when details of the land requirements are better known to establish how we may be able to reduce

# **Matter Raised EWR Co Response** any impacts where practicable. Flood plains/ water bodies Both Route Alignment 2 and Route Alignment 1 (an emerging preferred option at NSC) have a reduced length in the floodplain when compared to the Reference Case (Route Alignment 8). Route Alignment 2 crosses a groundwater SPZ and Route Alignment 1 does not, so Route Alignment 1 is deemed a 'major improvement' while Route Alignment 2 is only a minor improvement in relation to flooding when compared to the Reference Case. Alignment 2 comprises a shorter crossing of the River Great Ouse floodplain and routes via St Neots South Option B and then via the A428 Improvement Scheme lowering flood risk by being located nearer the sub catchment divide. This alignment routes south of Cambourne and crosses a groundwater SPZ. When assessing possible impacts from the project on the water environment, including watercourses, wetlands, aquifers and associated habitats, the assessment will consider effects both upstream catchments and downstream reaches that might be influenced by the route over the lifetime of the scheme, including the potential impacts of pollution generated during construction. These assessments will consider quantity (under a range of conditions) and quality, as well as aspects such as geomorphology and the wider value that the water environment provides in terms of habitats and biodiversity, and EWR Co will present the outcome of these as part of the Preliminary Environmental Information Report, published during the statutory consultation, and the Environmental Statement submitted as part of the DCO. Active travel – walking, wheeling, cycling: it is acknowledged that without mitigation Cambourne South stations (as per Route Alignment 2) would perform better than Cambourne North stations (as per emerging preferred options at NSC, Route Alignments 1 and 9), as Cambourne North is north of the A428. However, the reduced connectivity of Route Alignment 1 is capable of being mitigated by various factors including the provision of a new foot/cycle bridge over the A428. Future bus routes, cycling and walking facilities and public transport in respect of Route Alignment 1/1A will be considered at the next stage of development for EWR. Existing population in the catchment area around Cambourne North will be slightly lower than at Cambourne South, however, EWR Co has taken into consideration a number of factors when assessing the different station location

options, including potential housing delivery opportunities for each location, as

## **Matter Raised EWR Co Response** well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. Noise, air and light pollution The CoCP or an equivalent document will set out how construction impacts including pollution will be monitored, controlled and managed. EWR Co recognises noise, air and light pollution from both the construction and operation of a railway are important issues for local communities. The potential effects of noise, air and light pollution from the railway will be considered as EWR Co develops the designs for the Project. In relation to noise, Route Alignment 2 and is rated as a minor improvement relative to the Reference Case (Route Alignment 8) due to the slightly smaller number of dwellings potentially affected. This is the same rating as Route Alignment 1, an emerging preferred option at NSC. Therefore, the marginally shorter nature of Route Alignment 2 when compared to Route Alignment 1 is not considered to be a differentiator between these routes. On Air Quality, Route Alignment 2 would be a minor improvement when compared to the Reference Case Route Alignment 8. Although air quality impacts associated with Route Alignment 2 would affect fewer properties than Route Alignment 8, the larger volume of earthworks required (which includes for the excavation of cuttings as well as the formation of embankments) for Route Alignment 2 means that the overall air quality improvements as against the Reference Case is not as significant as that for Route Alignment 1. Overall, Route Alignment 2 was judged to be neutral in relation to the landscape and visual assessment factor in comparison to the Reference Design (Route Alignment 8), whereas Route Alignment 1 was judged to represent a minor improvement. Additionally, since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Heritage EWR Co will seek to avoid or minimise direct impacts on the most sensitive nationally and internationally designated heritage assets during construction activities. Consideration will be given to the setting and context of historic and cultural assets including conservation areas, archaeology, listed buildings and structures, historic views,

and landscapes. In relation to the historic environment, Route Alignment 2 would

# **EWR Co Response Matter Raised** represent a minor improvement on the Reference Case, due to the fact that it passes close to fewer designated buildings / areas. However, by comparison, Alignment 1 (an emerging preferred option at NSC) is classified as a major improvement due to it being passing close to even fewer designated buildings / areas. Alignment 2 avoids the heritage sensitive areas at Tempsford and Roxton. However, to the south of Cambourne, the alignment would pass through the complex heritage resource area of the Bourn Valley and east of Eltisley, comes in close proximity to a Scheduled Monument and associated listed building ("Pastures Farm – Moated site at Pastures Farm" and "Dovecote to the North East of Caxton Pastures Farmhouse") which is likely to result in adverse setting impacts to the designated assets. The alignment passes within 500m of six conservation areas. This includes Bourn – Village & Hall, Caldecote, Harlton, Kingston, Toft and Bedford. Route Alignment 1 passes within 500m of three conservation areas and was judged as a major improvement for the historic environment assessment factor, in comparison to the Reference Case (Route Alignment 8). EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Countryside and Landscape Impacts: the consultation was undertaken at an early stage in the design process and Jackdaw Lake was not specifically assessed in these early plans. At the statutory consultation we will share more information about specific areas and the potential environmental impact. In relation to landscape impacts, Route Alignment 2 does have notably less landscape impacts in comparison to the reference case due to not impacting on any landscape designations and on only a few woodlands. It does, however, have far greater visual impact than the reference case (Route Alignment 8), in particular forming very high visual impacts upon Chawston due to the A1 viaduct. In relation to reduced impacts on the countryside at the specific locations referenced in the NSC documentation: • No landscape and visual impact is created by Route Alignment 2

for Brickhill Country Park or the residents of Renhold, in contrast to the Reference

# **EWR Co Response Matter Raised** Case (Route Alignment 8). Alignment 1 (an emerging preferred option at NSC) also does not impact any designated landscape. • For Great Barford, Route Alignment 2 (and route alignment 1) avoids the Conservation Area, whereas in comparison, the Reference Case Route Alignment 8 comes within 500m of this designation. Between the Black Cat and Cambourne Route Alignments 1, 2 and 9 run parallel to the A428 for much of the route allowing the scheme to benefit from a 'shared travel corridor', although Route Alignment 2 deviates from this corridor near Eltisley. Using a 'shared travel corridor' could also help to reduce some adverse impacts of the scheme. Visual changes to the landscape would be concentrated in the A428 corridor rather than in areas not already subject to development, and there may be the opportunity to combine landscaping and other environmental mitigation measures. Route Alignment 2 is further from woodlands at the Little and Great Early Groves than the reference case Alignment 8. We do not anticipate that Alignment 2, Alignment 1 or Preferred Alignment 1 (Tempsford variant), would directly impact Little or Great Early Grove or Highfield Spinney woods or woods around Highfields Caldecote. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts and will continue to consider how we can best avoid impacts on these woodlands as we develop the design. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Ecology and biodiversity impacts: in relation to priority habitat areas, Route Alignment 2 has slightly lower impacts on such areas compared to the Reference Case (Route Alignment 8), whereas by comparison, Route Alignment 1 (an emerging preferred option at NSC) had relatively higher impacts, although given impacts within other environmental criteria this was not considered to be a differentiating factor affecting the choice of the preferred alignment. EWR Co recognises the importance of ecological connectivity and reconnecting fragmented areas of habitat to strengthen them and promote movement of wildlife. Through

the design EWR Co will seek to avoid impacts on "sensitive receptors", such as ecological habitats and green bridges and other crossing types will be considered to mitigate severance of habitats, maintain historic features, improve connectivity,

Matter Raised	EWR Co Response
	and positively integrate with landscape character. EWR Co will seek to ensure that landscape mitigation measures are closely integrated with the ecological requirements of both the Project and the wider area to ensure that the environmental legacy of the works is positive and to support EWR Co's commitment to Biodiversity Net Gain. Construction-related impacts on the environment will be identified and managed, as far as reasonably practicable, by a CoCP or an equivalent document submitted as part of a DCO application. This will include measures to control impacts related to ecology, tree protection and surface and groundwater management.
Many respondents expressed concern about potential disruption to roads and existing rail services from Alignment 9. Many of these respondents voiced specific concern that constructing the line would disrupt access to other parts of their communities, particularly in the villages of Renhold and Bourn. Some respondents also mentioned that the length of construction and uncertainty as to where it could take place, as concerns. Some respondents remarked that disruption from construction could prevent farmers in the area from accessing their fields. A small number of respondents also expressed concern about the potential loss of a train station at Sandy following the construction of Tempsford station.	Impacts on highways and PRoWs, impact of construction traffic: as stated above, EWR Co is seeking to maintain existing highway connections wherever feasible. EWR Co is not proposing to provide any new level crossings, as explained in paragraph 3.4.2. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. As detailed in the Roads and Footpaths section above, with regard to impacts to the highway network during construction, EWR Co will develop a comprehensive logistics strategy that must be adopted by all contractors and suppliers. This will enable EWR Co to plan the way in which people, materials and equipment are moved to and from the various worksites along the route of the proposed railway, working with local authorities and other developers to ensure that EWR Co's use of the local highway network is managed and to ensure that construction traffic is restricted to those routes which have the capacity to safely accommodate the additional traffic. As a result, this is not a consideration that differentiates between Route Alignments.  Access to farmland: while EWR Co may impact agricultural land and access for farm vehicles during construction, EWR Co will seek to reduce and mitigate potential impacts by working closely with landowners as designs progress. The company will seek to ensure that access to severed land for farmers and farm
	vehicles is maintained during construction. Route Alignments 9 and 1, the emerging preferred alignments at NSC, were considered to be neutral when compared against the Reference Case (Route Alignment 8) for the Agriculture,

# **Matter Raised EWR Co Response** Forestry and Soils (14.1) Environmental Supporting Consideration. Therefore, this was not a differentiating assessment factor between alignments. Length and location of construction Route Alignment 9 has a longer route length and additional complexity due to two more complex structures than the reference case. In terms of Programme Risk (level of confidence in estimate of delivery time and scale of potential impact on entry into service date), Route Alignment 9 would therefore be a minor worsening when compared to the reference case (Route Alignment 8). Route Alignment 1 and its variant, EWR Co's preferred alignment Route Alignment 1 (Tempsford variant), is judged neutral when compared to the Reference Case. Programme risk will be further understood when more detailed assessments have been undertaken and the construction programme is further developed. To set out how EWR Co will manage the construction of the East West Rail project a Code of Construction Practice (CoCP) or an equivalent document will be developed. The CoCP or equivalent document will contain provisions aimed at reducing disruption to local communities and mitigating impacts on the wider environment. EWR Co will work closely with its supply chain to ensure that land used would be secured and maintained appropriately throughout construction. The CoCP or equivalent document will include information about how land would be properly managed during the construction phase, such as keeping compounds secure, avoiding contamination from worksites into neighbouring land, keeping areas near compounds tidy and free from mud or litter, along with other measures designed to reduce the impacts of construction on local communities. Compliance with the CoCP or equivalent document will be secured through the Requirements of the DCO itself. Where the preferred route may impact businesses, including Tarmac Trading Limited EWR Co will work with them to mitigate potential impacts to their business operations. Concern regarding Tempsford station displacing Sandy station: Tempsford station is intended to support growth and connectivity with the ECML and communities within the surrounding and wider areas and is not designed to be a replacement for Sandy station. Relocate the route slightly further from villages/properties e.g., Caldecote, Barford, Roxton and Renhold. In developing our proposals, EWR Co has aimed to minimise the negative impact this may have on communities and in

particular people's homes, inevitably with an infrastructure project of this size,

### **Matter Raised EWR Co Response** there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignment 9 between Bedford and Tempsford station, EWR Co has developed Alignment 1 (Tempsford variant). Alignment 1 (Tempsford variant), is a variation of Alignment 1, which deviates from Alignment 1 south of Colesden, then runs north of Roxton and serves a Tempsford station location. To the east of Tempsford Station, Alignment 1 (Tempsford variant), would then follow the proposed route of Alignment 9, which merges with Alignment 1 east of Little Barford and then runs to a station north of Cambourne. Alignment 1 (Tempsford variant), would move the route further away from and significantly reduce and/or mitigate potential impacts at Ravensden, Renhold, Great Barford and Roxton associated with Alignment 9. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Potential impacts at Highfields Caldecote are being carefully review and since the 2021 Non-Statutory Consultation the design has been amended to avoid having a direct impact on the Linden Homes development at All Angels Park. Many respondents expressed concern about the accessibility of stations along Alignment 1. The proposed location of Cambourne North station is a concern for Accessibility of stations, transport links: EWR Co has taken into account the many respondents, who believe that the A428 will separate the community from accessibility of all potential station locations. Both proposed station options in Cambourne would be located close to existing communities. Cambourne North the station and make access more difficult for people travelling by foot and bicycle. The same respondents also remarked that the proposed station is too far station is separated from Cambourne by the A428 which may slightly reduce away from most residents of Cambourne and that this would result in increased connectivity to the existing settlement, compared to Cambourne South, motorised vehicle traffic. A few respondents also commented that the St Neots particularly for active travel options such as walking, wheeling and cycling. South Option A station is too far away from the centre of St Neots and question However, it is believed that this could be mitigated by a foot and cycle bridge over the A428. Also, the development of first mile/last mile strategies will be how this station would be connected to the town by public transport and cycle considered for the preferred option to mitigate such matters. This was therefore routes. not considered to be a differentiating factor. If the preferred alignment had connected with St Neots EWR Co would have considered, alongside local councils and Network Rail, how to provide the best method of connecting a St Neots EWR station with the current ECML station. The objective would be to minimise impact on St Neots and surrounding villages while facilitating connectivity which could be

# **EWR Co Response Matter Raised** achieved through new and enhanced footpaths, cycleways, and public transport options. Further analysis will be undertaken to draw firmer conclusions on the potential for housing and growth across both these locations. EWR Co will consider options for connecting the stations to existing settlements, transport networks and sustainable transport modes as part of our preparation for statutory consultation. All station locations will require additional connections via public transport routes, and this was therefore not a differentiating factor in the preferred route alignment decision. We will work with local authorities and transport bodies to ensure public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our station designs. Increase in motorised traffic: traffic and the potential for congestion around stations is expected to be broadly similar for all station location options and will be further examined at the next stage of design. When the final route alignment has been chosen, EWR Co will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. EWR Co will prepare a Traffic Management Plan (TMP) that includes measures aimed at maintaining safety for road users and reducing the impacts of construction traffic. EWR Co will develop a PEIR to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR, which will be presented at statutory consultation, will include information regarding the baseline for transport, access and non-motorised users, together with a preliminary assessment of impacts. This will be developed and refined for the Environmental Statement that is submitted as part of the DCO application. Concern over the creation of an unsafe pedestrian route to access bus services currently location on St Neots Road: the detailed design will be carried out in

accordance with recognised industry standards published at the time of detailed

Matter Raised	EWR Co Response
	design to provide a high level of safety and security. EWR has considered safety and security of the public and workers at all stages of design, and this will continue during construction and the route's operation and maintenance. The safety and security of workers, road users, non-motorised users (NMUs), supply chain and local people has been prioritised and considered so that risks are eliminated wherever possible. During construction, EWR will ensure that health, safety, and wellbeing performance meets and exceeds minimum legal requirements and industry best practice.
Many respondents expressed concern about the cost of this section. Of these respondents, many claimed the expense of cuttings, viaducts, embankments and earthworks would drive up the cost of the Project. Many others remarked that the perceived lower price tag of Route E concerns them, as a cheaper line could represent low quality and poor value for money. Many respondents also claimed there is little-to-no need for this section. Several respondents cited the existing stations at St Neots, Sandy and Biggleswade as evidence that the area is already served by train lines. Furthermore, several respondents were sceptical that post-pandemic passenger levels will match the expected demand for this section. Some respondents also claimed that there is a general lack of interest in travel into Bedford, further decreasing the section's necessity. Several respondents expressed concern that the complexities of constructing this line, due to the undulating terrain and clay soil as well as the required cuttings and viaducts,	Negligible benefits for local residents: EWR Co expects the new rail link to support significant local economic growth that will benefit individuals, communities, educational and research establishments, and businesses. EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g., you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. Furthermore, businesses will be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route.
would increase the cost and construction times.	Business case not based on accurate assumptions/data (i.e., not including new housing and freight): the Business Case involves gathering as much evidence, information and knowledge as possible. Evidence is gathered through stakeholder engagement, analysis of socioeconomic data, economic modelling, econometric modelling, land and environmental surveys, and local and national government and private sector plans. With both future potential housing and freight, EWR Co is working with a number of stakeholders to ensure that it has the most accurate and up to date information so that the Project, where possible, aligns with current and future plans for both areas.  Plans for both road and rail infrastructure – need for EWR: EWR Co believes that it is important for the new railway to complement other local transport initiatives and infrastructure without duplicating them including the A428, busway projects

# **Matter Raised EWR Co Response** and existing rail lines. At stations EWR Co will continue working with other organisations, including bus operators, to improve facilities, such as provision of onward travel information. Achievability of stated journey times: EWR Co has considered journey times as well as Performance, including Operational Resilience, in the assessment of route alignment options as part of the Network Capability assessment factors (design consideration assessment factors 6, 7, and 9). Journey times for Route Alignment 1, an emerging preferred alignment at NSC, are expected to be longer than Alignment 8 by approximately 1:30mins. This was deemed to be a minor worsening, however Performance (ranked on the frequency of activities like maintenance that would impact the service) was scored as a minor improvement for Alignment 1. These assessment factors are weighed up against other assessment factors such as environmental impact and affordability, together with all other relevant matters, to arrive at the Project's decisions. Consequently, all options to optimise journey time have been and will continue to be considered at all stages in the design of the railway system. Concerns re: longevity of infrastructure: all lines are being designed and constructed to same high quality expected from a modern trainline, and EWR Co is exploring how to introduce new and emerging technologies in its long-term train fleet. As part of the assessment factor process options were assessed for Operational Resilience and enabling new and emerging strategic changes in the rail sector and provision of flexibility to adapt to future changes in climate. The emerging preferred routes at NSC, Alignments 1 and 9, showed minor improvements of the reference case due the reduced length of the floodplain and additionally avoided the area of exposed Ampthill Clay. FMLM issues and transport links at stations. The ability of the new EWR stations to integrate into the wider transport network across all modes – including bus, walking, wheeling and cycling – has formed a key part of EWR Co's assessment of both route options and route alignments. EWR Co will ensure that public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our station designs. We will promote and prioritise both active and sustainable transport modes, and will continue working

# **Matter Raised EWR Co Response** with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. All station locations will require additional connections via public transport routes, and this was therefore not a differentiating factor in the preferred route alignment decision. Demand dependence on housing: EWR Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development. Given the preliminary stages that the emerging local plans are at, this means that postponing a decision on a preferred route alignment for EWR would delay realising the benefits of the Project across the entire route from Oxford to Cambridge and beyond. Meeting project objectives: the Strategic Objectives set by the DfT for the Project were stated in the 2021 Consultation Technical Report. These underpinned the development of route options that prioritised serving locations that could support growth and new homes, over fast end-to-end journey times, while still resulting in significantly faster journey times than would otherwise be available (e.g. connections via London). Ticket prices: specific ticket prices cannot be provided at the moment, however, more information will be provided as the Project develops. Levels of demand post-Covid: with regard to the impact of Covid-19, as detailed in paragraph 2.2.4 of the NSC Technical Report, the outbreak has significantly cut demand for rail travel in the short term. However, EWR would not enter into service until the end of the decade and the purpose of EWR is to enhance connectivity across the Oxford to Cambridge area as a whole and work is still ongoing to understand how the Covid-19 pandemic may affect commuter travel

# **Matter Raised EWR Co Response** patterns over the longer-term. Latest statistics released by the Department for Transport (DfT) show that national rail usage is currently around 80% of pre-covid levels (https://www.gov.uk/government/statistics/transport-use-during-thecoronavirus-covid-19-pandemic). Demand for Cambourne station given Park and Ride and C2C: EWR Co believes that it is important for the new railway to complement other local transport initiatives and infrastructure without duplicating them. With respect to the C2C busway, EWR services at Cambourne would not duplicate this proposed new provision between Cambourne and Cambridge. The busway offers the opportunity for customers to access convenient services to north and west Cambridge which also serves villages in-between, while the preferred route alignment for EWR would provide quick, direct links to the Cambridge South and Cambridge stations. In this respect, the new railway and the busway would be able to complement each other which many respondents told us was an important consideration. All alignments would in principle be able to provide these connections which means that it is not a differentiating factor in the route alignment decision. Cost of Route E: the cost of the Project formed part of the assessment factors for route option selection, which found that the difference between the Route Options in this respect was not sufficient to base the route choice decision on cost alone. Revised indicative estimates of upfront capital costs suggested that the cost to deliver Route E (£3.7 billion) would be similar to the cost for Route A (£3.6 billion) and lower than the cost for the other shortlisted route options (£3.9 billion - £4.3 billion). Need case for EWR: section 2.2 of the NSC Technical Report outlines the overall case for EWR. EWR Co has been set up to put the customer first and deliver a reliable and resilient railway. In the journey from Oxford to Cambridge, EWR crosses every north-south line out of London. EWR will provide increased connectivity to households and businesses across the route. When businesses become closer in effective proximity (e.g. you can travel between businesses quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and

Matter Raised	EWR Co Response
	knowledge spill-overs. Furthermore, businesses will be able to attract an increased
	pool of labour due to the reduction in journey time from areas along the EWR
	route. For households, residents will benefit from decreased journey times to
	areas along EWR and workers will be better connected to additional job
	opportunities along the route.
Many respondents expressed concern about the impact of the proposed	Impact on gas mains: all alignments cross major utility networks, including gas
alignment on the gas pipelines at Chequers Hill, Colesden & Chawston.	pipelines, including Route Alignment 1, an emerging preferred option at NSC, and
	in the same vicinities as those identified. These crossings have been identified and
	allowed for in our capital cost estimates, one of the assessment factors. While any
	diversion of major utilities is significant and has associated risks, it is usual for
	projects of this scale to have to deal with them and given that they are common to
	some extent in relation to all alignments this is not a differentiating factor in
	favour or against Route Alignment 6. EWR Co will engage with utility companies
	with the aim of minimising any disruption that may be associated with utility
	works. This will cover both existing utility supplies to local communities and
	extension of services to contractor worksites. Any necessary interruptions to
	services will involve liaison with relevant parties in advance to discuss appropriate
	mitigation. Designs for any utility diversions that may be required to deliver the
	Project will be discussed and agreed with the relevant utility companies and
	where appropriate will be set out at the statutory consultation.
Many respondents expressed concern about the potential stations at Cambourne	
South and St Neots South. Those who express concern regarding Cambourne	Concern about station being located at St Neots: should Alignment 2 have been
South largely mention the southern approach into Cambridge as a key factor, as	chosen as the preferred alignment St Neots station would act as an interchange
well as the encroachment of the station on villages near Cambourne, such as	between EWR and ECML routes, as such stimulating greater journey opportunities
Caxton. Several respondents stated that the station at St Neots South would have	and growth. The ECML is already a heavily used railway, so work with Network Rail
a negative impact on the roads surrounding St Neots, which they say are already	is ongoing in modelling the impacts of a new station in such proximity to the
congested and would become more so as people drive to access the station.	stations at St Neots and Sandy. Existing rail services, signalling and capacity of the
	line will also be examined. EWR Co needs to consider ECML and existing stations
	to successfully integrate the new service and maximise benefits to all. St Neots
	station (as included in both Alignments 1 and 2) options perform better than the
	Tempsford station (Alignment 8 – reference case) options in terms of mode shift
	benefits. Both St Neots stations are closer to a larger number of existing
	properties overall so are more accessible by bike. They also provide a minor
	improvement for Public Transport (bus) users as they are closer to St Neots so

# **Matter Raised EWR Co Response** have an improved journey time. In addition, St. Neots stations have better connectivity to the proposed A428 (shorter access road). However, potential coalescence within the existing St Neots area is considered to be a greater risk than for the Tempsford location which is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Preference for a station at Tempsford One of the key objectives of EWR is to enable sustainable housing and economic growth. The proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, as well as helping to ease some of the upwards pressure on the housing market. The majority of land within St Neots already contains housing and businesses and much of the land neighbouring the eastern side of the town is either already committed or allocated for future development. Therefore, our ability to support housing growth would be more effectively realised by constructing a new station between St Neots and Sandy rather than close to St Neots. EWR Co has considered the potential coalescence within the existing St Neots area. This is also considered to be a risk at Tempsford (i.e. with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk as St Neots as the Tempsford location is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1, to serve a station at Tempsford: EWR Co has considered the feedback from the 2021 consultation and concluded that the majority of Alignment 1 provides a better solution than the other routes presented for Section D between Clapham Green and The Eversdens. However, EWR Co has identified a localised variation of this route which incorporates part of Alignment 9 to serve a potential East Coast Main Line station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives

## **EWR Co Response Matter Raised** and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Impact to the roads in St Neots One of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. Should Alignment 2 have been chosen as the preferred alignment EWR Co would have considered, alongside local councils and operators, how to provide the best method of connecting a St Neots EWR station with the current town and communities. The objective will be to minimise impact on St Neots and surrounding villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. The 'Traffic and Transport' environmental assessment of the route alignments was not undertaken prior to non-statutory consultation. As a result, it was not reported in Appendix E of the NSC Technical Report, due to information related to vehicle movements, non-motorised user movement and movement along waterways and canals not being available at this time. EWR Co will consider traffic impacts and mitigations as part of traffic and transport assessments. EWR will undertake a Transport Assessment of impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. Outcomes of this will be reported in the Preliminary Environmental Information Report published at the statutory consultation and the Environmental Statement submitted as part of the DCO application. The assessment will consider impact of construction on the road network, such as changes to existing traffic patterns because of predicted construction traffic and the suitability of roads, including those around mentioned by respondents. Following consultation with all the relevant highway authority or other bodies, EWR will prepare a Traffic Management Plan (TMP) that includes

measures aimed at maintaining safety for road users and reducing the impacts of

### **Matter Raised EWR Co Response** construction traffic. EWR Co will develop a Preliminary Environment Information Report (PEIR) and present this at the statutory consultation. To assess the environmental impacts of the construction and operation of the Project, an Environmental Impact Assessment will be carried out. During the preparation of this assessment, mitigation requirements may be identified and incorporated into the proposals, either embedded within the design or as mitigation within the CoCP or an equivalent document. Concerns about station being located at Cambourne South: stimulating economic growth, housing and employment across the Oxford to Cambridge area is a key Project objective. Therefore, understanding how station location options might influence the development potential of their surrounding areas has been taken into account when comparing the route alignment options. This has included the potential for development in areas to the north of Cambourne. The use of an alignment via Cambourne and an access to Cambridge via the South was considered in selecting a preferred route option in 2020. In the 2021 consultation the appropriateness of this arrangement was the subject of a question to consultees. EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery estimates for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of Assessment Factor 2. Although EWR Co is still developing its analysis of each station option's potential for housing development, the evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South and so is more likely to be realised. Housing development at Cambourne North is expected to be able to retain separation from and between existing settlements such as Papworth Everard, Knapwell and Elsworth. Cambourne South (Route Alignment 2) station performs slightly better than Cambourne North (Route Alignment 1 and 9 - the NSC emerging preferences) station in terms of mode shift benefits. Cambourne North station is separated from Cambourne by the A428 which slightly reduces connectivity for active travel options. This is mitigated in part through proposals to provide new foot and cycle bridge over the A428. Cambourne North also positions the station much further from Caxton (which is located to the south

### **Matter Raised EWR Co Response** east of Cambourne) discouraging this existing community from active travel to the station. Cambourne North does have better connectivity to proposed A428 (shorter access road). EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, and this alignment also serves Cambourne North. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Impact to farmland EWR Co has aimed to minimise negative impacts on communities, people's homes and farmland. However, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts that cannot be avoided and will work closely with people who could be affected. Alignment 2 would be likely to impact approximately 40 farm holdings, of which two would be likely to experience a major impact from the construction of the Project. EWR Co has taken disruption to farmland into account as part of the 'Agriculture, Forestry and Soils' Assessment Factor (14.1), as set out in Appendix E of the NSC Technical Report. Route Alignment 2 was assessed to represent a Minor Improvement when compared to the Reference Case (Route Alignment 8). With regard to disruption to farmland, EWR Co has taken this into account as part of the 'Agriculture, Forestry and Soils' Assessment Factor (14.1), as set out in Appendix E of the NSC Technical Report, and Route Alignment 2 is judged to represent a minor improvement when compared to the Reference Case (Route Alignment 8). In developing our proposals, EWR Co has aimed to minimise the negative impact this may have on communities and in particular people's homes, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. With regard to disruption to farmland, EWR Co has taken this into account as part of the 'Agriculture, Forestry and Soils' Assessment Factor (14.1), as set out in Appendix E of the NSC Technical Report, and Route Alignment 2 is judged to represent a minor improvement when compared to the Reference Case (Route Alignment 8). Further information on details on the impact on farmland will be made available at the statutory

consultation. Impact of the A428 works at Black Cat Junction to potential St Neots South station Alignments 1, 2 and 9 run roughly parallel to the A428 Scheme for

### **EWR Co Response**

approximately 12km. The designs as shown assumed on a reasonable worst case basis that no integration would be possible due to the more advanced stage of the A428 Black Cat improvement scheme. However, there may be opportunities, by working with National Highways, to integrate the design and construction of the A428 Black Cat improvement scheme and EWR. EWR Co is working closely with National Highways to manage interfaces and explore opportunities between the projects and do not expect that the A428 works would constrict construction of a new EWR station at St Neots South. St Neots station (as included in both Alignments 1 and 2) options perform better than the Tempsford station (Alignment 8 – Reference Case) options in terms of mode shift benefits. Both St Neots stations are closer to a larger number of existing properties overall, and are thus more accessible by bike. They also provide a minor improvement for Public Transport (bus) users as they are closer to St Neots so have an improved journey time. In addition, St. Neots stations have better connectivity to the proposed A428 (shorter access road). However, potential coalescence within the existing St Neots area is considered to be a greater risk than for the Tempsford location which is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment.

Many respondents expressed concern over the complexity of constructing this alignment. Some respondents claimed that the complexity of viaducts into Tempsford would add to the time required for construction, with a few remarking that this added time would drive up carbon emissions from construction. A small number stated that the geology of the area, with its undulating terrain and the bedrock, adds to the difficulty of construction. A few respondents also expressed concern over negative impacts on Sandy station, which they state is an important station for its area. Some respondents also claimed the terrain of the area would have the added effect of increasing rail journey times, as trains would need to slow during inclines and bends.

EWR Co has considered the cost of construction and programme risk for each route alignment option (assessment factor 3, Capital costs). Complexity of construction is a factor in both cases and this includes the consideration of geology and construction durations. Route Alignment 6 and Route Alignment 1 (an emerging preferred alignment at NSC) represent the best options with regard to capital cost, with the differences expected to be more than 10% lower than the cost of the Reference Case (Alignment 8). Programme risk was considered to be 'Neutral' for Alignment 1 (and the Reference Case Alignment 8). This is based on the engineering design presented at NSC, and the complexity of construction will be further scrutinised for the Preferred Alignment, Alignment 1 (Tempsford

### **Matter Raised EWR Co Response** variant), . Programme risk (level of confidence in estimate of delivery time and scale of potential impact on entry into service date) is a smaller but still important consideration within the capital cost Assessment Factor. Assessment of this consideration took into account the amount of structural work (such as viaducts) required for each Route Alignment. All route alignments would require structural work, and the design for such works has been based on proven construction practices that have been carried out successfully on other projects. The designs have also been developed with consideration of the local context including topography, geology and environment factors. While Route Alignment 8 has the longest length of structures overall, Route Alignment 1 is considered to be neutral impact with regard to programme risk, so this is not a differentiating factor. Combining these considerations, capital cost was considered the most helpful differentiating factor in the overall judgement in relation to Assessment Factor 3 and was a key differentiating factor in the decision to choose emerging preferred options and a preferred alignment. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant), ) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Operational costs (assessment factor 4) are considered neutral at this stage of design. This was calculated using track length, and whilst Alignment 8 represents the shortest track length (37.9km) this was not considered a significant differentiator. EWR Co has taken into account journey times in the assessment of route alignment options. The journey time predicted for Route Alignment 8 was expected to be 1:38 / 1:36 minutes quicker Eastbound / Westbound than Route Alignment 1 due to the shorter track length. In order to estimate journey times the alignment track designs considered requirements for inclines and bends. These journey time related assessment factors are weighed up against other assessment factors such as environmental impact and affordability to arrive at the Project's decisions.

Consequently, all options to optimise journey time have been/are considered at all

### **Matter Raised EWR Co Response** stages in the design of the railway system. Assessment factor 14.3 (Climate) considered the greenhouse gas (GHG) emissions of the proposed Route Alignments. At this stage, assessment of GHG emissions considered emissions related to the design of the scheme such as track length, area of bridge and viaduct structures, earthworks required, and the embodied carbon in materials used to build the scheme. In this regard, all other route alignment options would perform better than Route Alignment 8. Route Alignment 8 would have the highest embodied material GHG emissions and highest GHG emissions, associated with bridges and viaducts. GHG emissions related to construction (e.g. transport and logistics) and operation (including maintenance) will be assessed at a later stage of design development. Route Alignment 8 would include a new station on the ECML located in the Tempsford area, which is intended to support growth and connectivity with the ECML and communities within the surrounding and wider areas. The proposed station at Tempsford is not designed to be a replacement for Sandy station and is not expected to negatively impact Sandy Station. Further details on the potential Tempsford station will be made available at the statutory consultation. Many respondents expressed concern that this alignment would have a negative EWR Co has taken into account the impact to air quality of each route alignment impact on air quality along the route. Most of these respondents cited diesel option (assessment factor 14.2). In this regard, Route Alignment 8 would likely fumes from trains as a key factor in this, with a small number mentioning impact residential properties in Roxton, Tempsford, Abbotsley, Caxton, Great increased car fumes from traffic caused by diverted vehicles and additional Cambourne and Crow End. Other route alignment options would impact fewer motorists accessing stations. These respondents do not believe that the mitigation residential properties and score better against this assessment factor, including measures would have a significant impact on this issue. Route Alignment 1, an emerging preferred option at NSC, which would represent a major improvement when compared to Route Alignment 8. The impact on different types of receptors such as residential properties, schools and other educational facilities, care homes and hospitals has not been specifically assessed at this stage, but this will be taken into account as part of air quality assessments going forward. This would also include consideration of ecological receptors such as sites containing sensitive vegetation designated at European, national or local level. For the purposes of appraising the environmental impacts of each option, the reasonable worst-case scenarios of electrification or diesel-powered trains have been used depending on the topic being considered. This is to ensure that for each topic the reasonable worst-case approach is adopted when considering the

impacts arising from each alignment. EWR Co will develop the proposed approach

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	and provide more details on this at the statutory consultation. In 2018, the
	Government challenged the rail industry to produce a vision for the removal of all
	diesel-only trains from the network by 2040 and EWR Co is committed to running
	a sustainable railway in the long term, with reduced emissions, including for
	carbon, NOx and particulates. EWR Co is aiming to deliver a net zero carbon
	railway and will be considering conventional and emerging technological solutions
	for powering trains when all EWR services are fully operational. In relation to
	greenhouse gas emissions, all other route alignment options would perform better
	than Route Alignment 8. This route alignment would have the highest embodied
	material greenhouse gas emissions and highest greenhouse gas emissions of
	bridges and viaducts. In these cases, Route Alignment 1 would be a major
	improvement on the reference case (Route Alignment 8) and as a result
	greenhouse gas emissions is a differentiating factor. The impact from an increase
	in road traffic around stations has not been assessed at this stage of design, but is
	considered to be similar for all options and thus is not a differentiating factor.
	EWR will prepare a Transport Assessment to consider the impact on the strategic
	and local highway networks, road safety, and local sustainable modes of transport,
	including public transport. It will also set out the impact of construction on the
	road network, including changes to existing traffic patterns because of predicted
	construction traffic. EWR Co will develop a Preliminary Environment Information
	Report (PEIR) to describe the likely environmental effects of the proposals. This
	process involves identifying potentially significant adverse impacts resulting from
	the proposals, allowing them to be avoided or minimised where possible, as well
	as identifying any potential beneficial environmental impacts. The PEIR will include
	information regarding the baseline air quality environment and identification of
	the relevant air quality standards and targets. The likely risks from construction
	activities and potential impacts from operation, including identification of
	mitigation and control measures will also be presented as part of the PEIR which
	will form elements to be considered at the statutory consultation. A full
	environmental statement will then be submitted as part of the development
	consent order application and will assess changes in nitrogen oxides (NOx), fine
	particulates (known as PM2.5 and PM10) and dust. This assessment will follow
	best practice and guidance such as the guidance set by the Institute of Air Quality
	Management and other recognised bodies. It will also take account of the scheme

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	design and the local environment, such as impact on sensitive receptors like schools, care homes and residential properties. The team will seek to reduce the impact the new railway may have on air quality. This will include considering what vehicles and equipment will be used during the construction and operation of the railway, as well as how to manage work sites to avoid and reduce any dust creation. These working methods will be set out in the Code of Construction Practice (CoCP) or an equivalent document.
Many respondents expressed concern that this alignment would increase noise in the area. Several of these respondents specifically identified noise associated with trains passing by their villages, while a small number mention the noise from construction of the line as likely to be particularly disruptive.	Noise impacts and vibration: EWR Co has taken into account the potential noise and vibration impacts during both construction and operation during appraisal of the route alignments (Assessment Factor 14.13). While all route alignment options are expected to have the potential to cause some adverse noise and vibration impacts on communities, Route Alignments 1, 2 and 6 each represent a minor improvement to the Reference Case (Route Alignment 8) regarding potential noise and vibration impacts, due to a smaller number of dwellings potentially affected. However, overall this was not on its own a differentiating factor. Comprehensive assessments will be carried out and will use industry-leading computer modelling, which can incorporate information on local geology to simulate potential noise and vibration impacts along the whole route as part of the assessments on any mitigations required. These will include consideration of sensitive receptors, such as specialist businesses or community facilities. The assessments and any mitigation measures will form part of the Environmental Statement (ES) submitted as part of the DCO application. EWR Co will also develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals to be presented at the statutory consultation. The PEIR will include information regarding the existing baseline noise environment, together with construction and operational noise limits having had regard to the appropriate guidance and legislation. Construction and operational noise levels generated from the proposed works, as well as an assessment of potential vibration impacts, will also be presented as part of the PEIR which will form elements to be considered at the statutory consultation. Additionally, further detail will be provided on the freight strategy, and the approach to avoiding or reducing potential noise and vibration impacts from freight trains which may run on EWR, during a phase of statutory consultation. Without any mitigation, R

### **Matter Raised EWR Co Response** Alignment 2 has the potential to create adverse operational noise impacts at the following communities: Clapham East, Clapham Park Wood, Woodlands Park, Graze Hill, Ravensden North-west, Lower Grange / Sunderland Hill, Wilden, Chequers Hill North, Wilden East, Duck's Cross, South Brook, Colesden, Spinney Road, Chawston, Chawston East, Wintringham, Wintringham Hall, Caxton, Lower Cambourne, Great Cambourne, Crow End, Caldecote, Kingston, Little Eversden. However, with appropriate mitigation, the communities subject to potential adverse noise impacts would reduce to: Graze Hill, Lower Grange / Sunderland Hill, Colesden, Spinney Road, Chawston, Wintringham Hall and Crow End. EWR Co recognises noise and vibration from both the construction and operation of a railway is an important issue for local communities. Ahead of DCO submission, EWR Co will develop a noise policy, which will set out a plan designed to establish and mitigate noise and vibration to avoid any significant adverse impacts on health and quality of life. EWR Co recognises concerns about the impact of noise and vibration and is committed to considering measures that will reduce noise and vibration. This includes: - Choice of trains - Track technology - Noise barriers which form one of a number of mitigations that may be appropriate where tracks may create noise and vibration. EWR Co proposed operational hours for passenger services in Appendices A and B of the 2021 Consultation Technical Report, which referred to a potential public facing timetables (planned trains in passenger services) to provide some initial guidance. There will also be less intensive train movements as required outside these hours for infrastructure maintenance, inspection, freight and other activities as part of the national rail network. We will continue to work on the concept of operation to inform the operational timetable. The construction contractors who will build the scheme will be required to comply with the Code of Construction Practice or equivalent document, and mitigation measures will also be put in place to reduce noise and vibration impacts as far as practicable. These may include the use of temporary screening and use of quieter or lower vibration construction methods and equipment. EWR Co will endeavour to schedule activities which are likely to produce higher levels of noise to weekday daytime hours wherever possible. Occasionally, it will be necessary to work at

other times and EWR Co will engage with local people and communities to implement arrangements which are least disruptive. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities

Matter Raised	EWR Co Response
	to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways.
Many respondents expressed concerns about the potential impact on flooding in the area. These respondents stated that the line crossing flood plains at the Great Ouse could cause the line itself to be flooded and result in more flooding generally.	Area of flood zone, flood risk and impact on existing mitigation assets: the area of flood zone impacted by the potential alignments was considered as part of the assessment factors of the Route Alignment Options (assessment factor 14.18). Route Alignment 9 has a similar alignment to the Reference Case (Route Alignment 8) at the River Great Ouse crossing and Tempsford, but avoids the groundwater Source Protection Zone (SPZ) south of Cambourne by routing via the A428 Improvement Scheme and Cambourne North. Route Alignment 9 represents a minor improvement to impacts on Water Resources and Flooding, when compared to the Reference Case (Route Alignment 8). Route Alignment 1 (an emerging preferred alignment at NSC) represents a major improvement. EWR Co take climate change and the future risk of flooding seriously and will continue to develop our approach to understanding and mitigating and Project-related risks linked to climate change. Flood risk assessments, which will also consider potential impacts and mitigation for existing flood mitigation assets, will help inform the design process. If it is demonstrated that the route obstructs flood water, mitigation such as culverts or negatively impacts balancing ponds, viaducts, bridges will be considered to assess how they can support the movement of water and to not increase flood risk elsewhere. If the scheme is demonstrated to increase flooding, appropriate mitigation measures such as compensatory storage will be identified and promoted prior to construction. Where possible, these mitigation measures will provide multiple benefits to the route and local communities. EWR Co will also continue working with the Environment Agency to share information, data and modelling to support this work, in addition to reviewing the condition and capacity of the railway drainage systems with the aim of reducing future risk of the railway flooding. To address construction-related impacts on flood risk, the Code of Construction Practice will set out measures for surface and groundwa

Matter Raised	EWR Co Response
	proposed Tempsford station location for Route Alignment 9 (Tempsford Option A)
	would be located outside the identified flood zone. The Environment Agency plans
	to undertake flood modelling in this area of Tempsford alongside considering the
	modelled flood zone extents to ensure that they are accurate and up to date. EWR
	Co will continue engaging with the Environment Agency to support this work
	where possible and use updated information to inform design of the route
	alignments.
Many respondents expressed general support for Section D. Several of these	Full assessments of the five route options were completed in 2019, including
respondents stated that Bedford, and North Bedfordshire in particular, is	understanding and using the feedback from 2019 consultation. Details of these
underserved by transport links and has opportunities for economic growth in the	assessments can be found in the Preferred Route Option Report (East West Rail,
future. Some respondents only express support for the more southern route	2020). One of the reasons for identifying Route E as the preferred option was due
alignments.	to benefits to transport users, namely for Bedford passengers (as stated in
	paragraph 1.22 of the Preferred Route Option Report). Alignments presented for
	Section D within the 2021 consultation were then developed from the Route E
	corridor. The preferred EWR Co alignment, Alignment 1 (Tempsford variant),
	serves a North Cambourne station. EWR Co will work with Local Authorities to
	consider relevant Air Quality Management Areas. EWR Co will develop a
	Preliminary Environment Information Report (PEIR) to describe the likely
	environmental effects of the proposals. The team will seek to reduce the impact
	the new railway may have on air quality.
Many respondents expressed support for Alignment 1 on the basis of a lower cost	
compared to other route alignments, which they suggested is due to fewer	Cost: at the time of the NSC, Route Alignments 1 and 6 were estimated to be the
sections of the route requiring raised elements along the route, such as viaducts	options with the lowest capital cost (assessment factor 3, Capital costs), with cost
and embankments. Several respondents also remarked that this could reduce	differences expected to be more than 10% lower than the cost of the Reference
construction time, as well as journey times on the line.	Case (Route Alignment 8). This cost estimate is based on engineering design at this
	stage, factoring in the amount and length of engineering works. Route Alignment
	1 would require a shorter total length of structures and less earthworks than the
	Reference Case. Overall, Route Alignment 1 represents a minor improvement to
	the Reference Case for this assessment factor. Operation and maintenance costs,
	land and property, risk, and any inflation beyond 2019 were not included in the
	calculation for assessment factor 3. The costs associated with these factors will be
	calculated at a later stage in the design, with further information being presented
	at statutory consultation.

Many respondents expressed support for this alignment as they feel it would have lower impact on homes along the route. Many of these respondents commented that Alignment 6 would not have the negative impact on the construction of the new housing development at Bourn Airfield that Alignment 1 and Alignment 9 could have. Many others support this route alignment option as it would service the growing community of St Neots. Several respondents also expressed support for this alignment as it would require demolition of fewer properties along the route. Similarly, several respondents suggested that this alignment will have a lower negative impact on the rural communities in North Bedfordshire, as it would pass further from them.

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Length of construction programme: with regard to construction programme, this was not a differentiating factor in the assessment as there is nothing considered as substantially different between the route alignments that would prevent any of the alignments from progressing. In terms of programme risk, which was considered as part of assessment factor 3 (Capital costs), Route Alignment 1 is considered neutral compared to the Reference Case (Route Alignment 8). It is expected that the construction programme would be in the order of nine months longer than the best scoring option for this matter (Route Alignment 6).

Journey times: regarding journey times, Route Alignment 1 is a longer alignment than Route Alignments 2, 6 and 8, because it serves Cambourne North. Although this would lead to a slightly longer journey time, this is expected to be less than two minutes. These journey time related assessment factors are weighed up against other assessment factors such as environmental impact and affordability to arrive at the project's decisions. Consequently, all options to optimise journey time have been/are considered at all stages in the design of the railway system.

In developing our proposals, EWR Co has aimed to minimise the negative impact this may have on communities and in particular people's homes, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. Demolitions and housing impacts Overall, there will be fewer properties impacted from the alignment. Alignment 6 is expected to require 9 property demolitions; 7 properties located around Broadway, Bourn, 1 property in Wilden, and 1 property south of Little Barford. The Reference Case is expected to require 8 residential property demolitions and has the potential to result in amenity or isolation impacts on the Disabilities Trust care home on Graze Hill. All options have the potential to result in amenity or isolation impacts, and amenity impacts to a number of community facilities which are of a lower sensitivity to construction or operational impacts. This is expected to be neutral for all options. Route Alignment 6 is not furthest away from houses since Route Alignment 1, an emerging preferred option at NSC, would have the fewest number of residential properties within 500m of all shortlisted alignments. Route Alignment 6 shares the same route in north Bedfordshire with Route Alignments 1 and 2, meaning that it performs similarly in

### **EWR Co Response Matter Raised** respect of the rural communities in that area. Where land is acquired or proposed to be acquired, the Compensation Code sets out the circumstances in which compensation is payable, EWR Co provided a guide to compulsory purchase compensation Guide to Compulsory Acquisition and Compensation. Compensation is also available for properties in proximity to the new railway which may be affected by various physical factors of the operation of the railway once it is in use, this is referred to as Part 1 compensation for which we included a guide on the website – Guide to Part 1 claims. Also, EWR Co will be introducing a Proposed Need to Sell Property Scheme at Preferred Route Announcement to assist people with a pressing need to sell but unable due to the Project. EWR Co consulted on a proposed Need to Sell scheme at the same time as the main non-statutory consultation and the details for the Guide to the Proposed Need to Sell Property scheme are available here: The Guide to the Proposed Need to Sell Property Scheme. EWR Co will discuss the detailed design of the scheme with the landowners when the land requirements are known (these will be known by the statutory consultation) with the landowners to seek to reduce the impact. Cambourne South Station route impacts It is not the case that alignments connecting to Cambourne South Station would have a lower impact on homes. Route Alignment 6 would require the joint highest number of residential demolitions on the route with nine properties – seven of which are located around Broadway, Bourn, and only impacted by alignments connecting to Cambourne South Station. One property is in Wilden and one property to the south of Little Barford. This is judged to be neutral compared to the Reference Case (Route Alignment 8). Impact on developments It is true that Route Alignment 6 avoids the housing developments at Graze Hill and Bourn Airfield, and that it could provide connections to support St Neots. The NSC emerging preferences Alignments 1 and 9 and Preferred Route Alignment 1 (Tempsford variant), would only impact the north-eastern corner of the proposed Bourn Airfield development and it is considered most of the development could be delivered unimpeded. EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E

of the NSC technical report. The evidence reviewed so far suggests that, on

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	balance, development around the Cambourne North station would require fewer,
	or less significant, mitigation measures than around Cambourne South.
Many respondents expressed support for this route alignment option as it avoids	There are still a significant number of major pipeline crossings for this route
alterations to the gas pipelines at Chequers Hill and Colesden.	alignment option that will need to be further assessed, including Gas pipelines
	between Bedford and Tempsford. This assessment will be undertaken prior to
	statutory consultation. All route alignment options would have the potential to
	impact pipelines and other infrastructure, and this was not considered to be a
	differentiating factor between route alignments. EWR Co has and will continue to
	liaise and consult utilities operators, local authorities and landowners throughout
	the design and development process to understand what infrastructure may exist
	within the vicinity of the project. Where considered practical and feasible, the
	proposals for the route are to be adapted to mitigate the impact on these
	pipelines. This will be considered further at the next stage of design, as explained
	in paragraphs 4.2.6 to 4.2.8 of the Consultation Technical Report. Once ready to
	enter construction, utility works will conform to the appropriate regulatory and
	statutory clearances and distances, with works carried out in accordance with
	health, safety, and construction legislation, as well as relevant technical standards
	and guidance. As mentioned in section 4.2.2 of the NSC Technical Report, EWR Co
	has considered the impact of the Project on existing highways, local roads, PRoWs
	and private access roads as part of the design and assessment of all route
	alignment options. It is not considered that this differentiates between route
	alignments. EWR Co acknowledges the benefits potentially available from aligning
	the project with the proposed A428 Black Cat Improvement scheme. Overall,
	Route Alignment 9 with regard to environmental impact was considered a minor
	improvement over the Reference Case (Route Alignment 8). The Alignment 1, an
	emerging preferred alignment at NSC alongside Route Alignment 9, is viewed as
	neutral, requiring less earthworks than the reference case.
Many respondents felt that this alignment would have a positive effect on roads	Station at St Neots positive for roads and footpaths In terms of existing highways,
and paths across the route. In particular, these respondents remark that a station	footpaths and bridleways being impacted (including crossed) – see response in the
at St Neots, with quicker access to Cambridge, would ease road traffic congestion	same 'Roads and Footpaths' section of 'Concern' St Neots station (part of both
around St Neots. A small number remark that this alignment would avoid the line	Route Alignment 1 and 2) options perform better in respect of overall connectivity
having to cross the A428, which would prevent further congestion on that road.	to existing properties than Tempsford station (Route Alignment 7-9) options. St
Many respondents also remark that following existing transport routes, in this	Neots stations are closer to St Neots and are thus more accessible by bike and
case the A428, would generally make the alignment less noticeable and contain its	other active travel modes. They also provide a minor improvement for public

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impacts to an area already utilised by transport. A small number suggest that this alignment would have less impact on the A1 and the A1198.

transport users compared to Tempsford stations as they are closer to St Neots, resulting in improved journey times. In terms of connectivity, while Tempsford stations are closer to the Tempsford community, St Neots stations are closer to a larger number of properties overall. In addition, St. Neots stations may have better connectivity to the proposed A428, due to a shorter road connections between the proposed stations and the proposed A428 than for Tempsford. EWR Co has considered the potential coalescence within the existing St Neots area. This is also considered to be a risk at Tempsford (i.e. with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk as St Neots as the Tempsford location is further away from the existing settlements. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant), ) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. In relation to the reducing car travel between St Neots and Cambridge and accessibility of station locations, one of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within the station design work. We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information.

Car parking provision will also be considered. A428/ impacts on main roads: with regard to impacts to the highway network during construction, EWR Co will develop a comprehensive logistics strategy that must be adopted by all contractors and suppliers. This will enable EWR Co to plan the way in which people, materials and equipment are moved to and from the various worksites along the route of the proposed railway, working with local authorities and other developers to ensure that EWR Co's use of the local highway network is managed and to ensure that construction traffic is restricted to those routes which have the capacity to safely accommodate the additional traffic. Although Alignment 2

### **Matter Raised EWR Co Response** would not need to cross the A428 south of St Neots it would cross the road between Eltisley and Cambourne. In terms of impact on the A1, all of the route alignments would be required to cross over the A1 on a viaduct, therefore any complexity of construction relating to a particular angle of crossing, or location, will be analysed at the project progresses to the next stage of design. In terms of impact on the A1198, both Route Alignment 2 and reference case Route Alignment 8 include a station at Cambourne South, which is in close proximity to this existing highway. As a result, if this route had been taken forward to DCO provision will be included within the design and layout of the station and associated access to link in with the road in an optimal way, and mitigate potential impacts. In terms of improving congestion, the projected traffic and the potential for congestion around St Neots and Tempsford stations is expected to be broadly similar, and will be further examined at the next stage of design. Regarding Cambourne South existing road connections EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. Cambourne South (Route Alignment 2) station performs slightly better than Cambourne North (Route Alignments 1 and 9, emerging preferred alignments at NSC) station in terms of mode shift benefits. Cambourne North station is separated from Cambourne by the A428 which slightly reduces connectivity for active travel options. This is mitigated in part through proposal to provide new foot & cycle bridge over the A428. Cambourne North also positions the station much further from Caxton (which is located to the southeast of Cambourne) discouraging this existing community from active travel to the station. Cambourne North does have better connectivity to proposed A428 (shorter access road). Construction traffic impacts In terms of construction traffic being perceived to be less, the capital costs section of the NSC Technical Report Appendix E contains, on page 14, detail confirming that Route Alignment 2 represents a minor improvement in terms of

programme risk when compared to the Reference Case, on the basis that the

Matter Raised	EWR Co Response
	route would involve less earthworks and less structural work. It could be deduced from this that construction traffic would, as a result, be likely to also be less, but further analysis will be undertaken as the project progresses in order to assess this. In comparison, Route Alignment 1 (an emerging preferred option at NSC) was neutral when compared with the Reference Case, as although it has a shorter length of structures and less earthworks, this was countered by a longer route. Again, further analysis will be undertaken as the project progresses in order to assess the effects of construction traffic. At this stage, this was not considered to be a differentiating factor in the decision to choose route Alignment 1 as an emerging preferred alignment.
Many respondents specifically identified the directness of the alignment as having a positive impact on journey times. Many others suggested that this directness also makes the route cheaper and faster to build.	Journey times: all options to optimise journey time have been and will continue to be considered at all stages in the design of the railway system. EWR Co aims to provide a frequent passenger service through designing a flexible railway, with two railway tracks for EWR service use throughout, allowing the new services to offer attractive journey times. The indicative target maximum journey times are based on indicative route and infrastructure studies and are being validated as the Project progresses. EWR Co has taken into account journey times in the assessment of route alignment options, as set out in within the Design Considerations sections 7 and 9 of the NSC Technical Report Appendix E. For short distance passenger services, Alignment 2 was judged as 'neutral' when compared to the reference case (Route Alignment 8). The journey time predicted for Route Alignments 2 at the NSC was 25 / 43 seconds quicker Eastbound / Westbound than the reference case, however, this slight difference was not considered to be significant and is represented as neutral for Transport User Benefits. This is due to the greater track length for Route Alignment 2 than the reference case. However, as set out in Section 9.8 of the NSC Technical Report the assessment of the route alignments concludes that the difference in overall Bedford to Cambridge journey times is sufficiently small that the additional benefits associated with Route Alignment 1 as detailed in Section 9.8 in the Consultation Technical Report (East West Rail, 2021) mean that Route Alignment 1 (an emerging preferred option at NSC) performs better overall. As a result, Route Alignment 1 was chosen as an emerging preferred route at NSC. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at

### **Matter Raised EWR Co Response** Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of a future public consultation. However, Route Alignment 1 was also assessed as neutral for short distance connectivity, but a minor worsening against the Reference Case for short distance passenger services. This is due to the greater track length for Route Alignment 2 than the reference case. For long distance passenger services (in terms of the strategic consideration of the extent to which EWR facilitates services beyond Oxford to Cambridge), the Bedford to Cambridge (short distance) journey time differences between the route alignment options were sufficiently small that it they would be unlikely to affect interchange opportunities at Cambridge. As a result, this was scored neutral across all options. As all alignments have the same length of the alignment that uses or neighbours existing lines, the length of Alignment 2 or any other alignment is not considered to be related to the risk of disruption to existing lines. Affordability: in relation to overall affordability, Route Alignment 2 is not the cheapest route alignment nor is it the most expensive. Route Alignment 2 was assessed as 'neutral' when compared to the Reference Case (Route Alignment 8). Route Alignment 1, an emerging preferred option at NSC, was assessed as a 'minor improvement' against the Reference Case. This means that the costs (including capital, operating, maintenance and renewal) would be lower for Route Alignment 1 than Route Alignment 2. Also, in relation to the duration of construction, Route Alignment 2 represents a minor improvement in terms of programme risk when compared to the Reference Case, on the basis that the route would involve less earthworks and less structural work, however the overall judgement based on Supporting Considerations was neutral, whereas the Route Alignment 1 was judged to represent a minor improvement, due to the fact that it's up front capital costs were more than 10% lower than the Reference Case (Route Alignment 8). Station location EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. Further information will be presented

during statutory consultation. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far

Many respondents stated that Alignment 9 would have a positive impact on traffic in the area, while avoiding some of the negative impacts on roads and paths that other route alignment options may have. Several respondents claimed that utilising the transport corridors would prevent traffic for the line being routed through villages, such as Bourn and Caxton, which should mitigate traffic from both construction and once the line is operating. These respondents remarked that the more rural roads of the area are ill-suited to handle more traffic, and so support this route alignment option as it uses A-roads to service the line. A small number of respondents remarked that additional options for rail travel will reduce pressure on roads generally. A few respondents also remark that a station at Tempsford would not hinder further development of the A428.

### **EWR Co Response**

suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. EWR Co has considered the potential coalescence with the existing St Neots area. This is also considered to be a risk at Tempsford (i.e. with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk as St Neots as the Tempsford location is further away from the existing settlements. EWR Co will consider, alongside local councils and Network Rail, how to provide the best way of connecting the EWR station with the existing St Neots communities. The objective will be to reduce impact on St Neots and surrounding villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant),) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

It is intended that EWR will help to reduce road congestion and pre-emptively help to avoid increases which may otherwise be associated with new housing or economic development, in favour of a more sustainable form of transport, as a result of quicker and more reliable journeys over long distances encouraging modal shift to rail from private vehicles. As mentioned in section 4.2.2 of the NSC Technical Report, EWR Co has considered the impact of the Project on existing highways, local roads, PRoW and private access roads as part of the design and assessment of all route alignment options. It is not considered that this differentiates between route alignments, although EWR Co acknowledges the benefits potentially available from aligning the project with the proposed A428 Improvement scheme. With regard to impacts to the highway network during construction, EWR Co will develop a comprehensive logistics strategy that must be adopted by all contractors and suppliers. This will enable EWR Co to plan the way in which people, materials and equipment are moved to and from the various worksites along the route of the proposed railway, working with local authorities

Many respondents stated that there may not be a need for this stretch of line. These respondents cite the new and planned bus links between Cambourne and Cambridge, as well as the existing station in St Neots, as evidence that these towns do not need additional stations. Furthermore, some respondents questioned whether a considerable number of local people would actually use the line rather than driving, particularly given the perceived additional length and journey time of this route. Several respondents also felt there would be no local benefit to residents along Alignment 1, especially given the considerable perceived downsides. Some respondents claimed that the Covid-19 pandemic has changed general demand for rail travel, thus also casting doubt among these respondents on the need for Alignment 1.

### **EWR Co Response**

and other developers to ensure that EWR Co's use of the local highway network is managed and to ensure that construction traffic is restricted to those routes which have the capacity to safely accommodate the additional traffic. As a result, this is not a consideration that differentiates between Route Alignments. Assessments on the impact of the route alignments on traffic and transport (assessment factor 14.16) requires a greater level of detail about the scheme than is available at this stage. As such, this assessment factor has not been applied and the outcome is not considered to assist in differentiating between route alignments. This topic will be the subject of detailed review in later phases of project development. Alignment 9 (an emerging preference at NSC) has less earthworks and a shorter overall length of structures than the reference case. This is countered by a longer route length and higher structural complexity than the reference case with two crossings under roads (A428 and B1046) requiring traffic management in villages like Bourn and Caxton. In comparison, the other emerging preference at NSC Alignment 1 is still considered an improvement on the reference case due to having less earthworks and shorter length of structures. Alignment 1 would not require traffic management. EWR Co has taken into account the impact that each route alignment option would have on committed developments and interfaces with committed schemes including the A428.

Need for EWR: the Case for EWR is detailed in Chapter 2 of the NSC Technical Report. EWR is part of the Government agenda to create a range of opportunities for people right across the area and help to spread prosperity across the UK, and Section D of the route is considered crucial in achieving this. EWR will offer an alternative form of transport which will help to ease congestion on busy parts of the road network, such as between Bedford and Cambridge. Currently, due to this heavy congestion in and around Cambridge, it can take between 45 and 100 minutes to travel from Bedford to Cambridge via car, whereas East West Rail is anticipated to reduce this journey time to around 30 minutes, therefore offering a journey time saving. In addition, EWR will provide increased connectivity to households and businesses across the route. For households, residents will benefit from decreased journey times to areas along EWR and workers will be better connected to additional job opportunities along the route. When businesses become closer in effective proximity (e.g., you can travel between businesses

### **Matter Raised EWR Co Response** quicker than you previously could), then productivity gains can be made through closer links to suppliers, a more dynamic and specialised labour market, and knowledge spill-overs. . Furthermore, businesses will be able to attract an increased pool of labour due to the reduction in journey time from areas along the EWR route. Alignment with Busway and bus services EWR are liaising with Greater Cambridge Partnership C2C Busway scheme so that design interfaces between the schemes can be appropriately managed and opportunities explored. EWR is complemented by C2C and local buses as these will enable local connections to destinations not directly served by EWR and in turn EWR will provide more efficient and direct connections to key stations including Cambridge South and Cambridge. St Neots Station location If the preferred alignment had connected with St Neots EWR Co would have considered, alongside local councils and Network Rail, how to provide the best method of connecting a St Neots (or Tempsford) EWR station with the current ECML station. The objective would be to minimise impact on St Neots and surrounding villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. Enabling housing growth and contributing to transformational growth within the Oxford to Cambridge area is a key part of EWR's purpose. A new station at a St Neots or Tempsford location would provide a connection with the ECML and is expected to enable housing growth in the area. However, EWR is committed to increasing prosperity and connectivity across the region, and therefore options to efficiently connect existing communities, such as St Neots, with EWR remains important and we will continue to develop proposals to enable easy accessibility for these communities, including through the provision of improved first mile / last mile connectivity, to our proposed network. EWR Co will work with Cambridgeshire County Council and Huntingdonshire District Council to enable new stations to be aligned with local transport plans, making it easy to walk, cycle or use public transport to get to and from the station. Our plan is to maximise connectivity to stations which we believe will deliver communitywide benefits. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the

statutory consultation.

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	Assessment of COVID impact of rail journeys: with regard to the impact of Covid-19, as detailed in paragraph 2.2.4 of the NSC Technical Report, the outbreak has significantly cut demand for rail travel in the short term. However, EWR would not enter into service until the end of the decade and the purpose of EWR is to enhance connectivity across the Oxford to Cambridge Area as a whole and work is still ongoing to understand how the Covid-19 pandemic may affect commuter travel patterns over the longer-term. Latest statistics released by the Department for Transport (DfT) show that national rail usage is currently around 80% of precovid levels (https://www.gov.uk/government/statistics/transport-use-during-thecoronavirus-covid-19-pandemic).  Journey time: EWR Co has taken into account journey times in the assessment of route alignment options. The journey time predicted for Route Alignments 1 was expected to be 1:38 / 1:36 minutes longer Eastbound / Westbound than the base due to the increase in track length and represents a minor worsening for Transport User Benefits. These journey time related assessment factors are weighed up against other assessment factors such as environmental impact and affordability to arrive at the project's decisions. Consequently, all options to optimise journey time have been/are considered at all stages in the design of the railway system. It is considered that EWR will provide more direct journeys to key destinations including Cambridge station than is currently available through car or
Many respondents supported Alignment 2 as they didn't feel it would affect delivery of the new housing development at Bourn Airfield. Many respondents expressed support for the connectivity between St Neots and Cambridge. Several of these respondents remarked that St Neots, being a growing community, is underserved by existing transport links. A considerable number also commented that this alignment would have less negative visual impact than other route alignment options, primarily because it would not require viaducts.	Alignment with planned housing development: stimulating economic growth, housing and employment across the Oxford to Cambridge area is a key Project objective for the scheme. The high-level differences identified in the housing potential associated with station options enables EWR Co to identify one or more emerging preferences. The importance of housing and wider economic growth has resulted in Alignment 1 and 9 being identified as NSC emerging preferences from the shortlisted Route Alignment Options. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as

### **Matter Raised EWR Co Response** Alignment 1 (Tempsford variant), ) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation Co has been monitoring the progress of new and emerging development plans across the area, including in Bedford Borough, Central Bedfordshire and the proposed Greater Cambridge Local Plan. The allocation of land for development is a matter for local planning authorities. While the location of EWR stations might facilitate this, it is important to note that the railway is also intended to provide new connections for existing settlements, residents and businesses – not just future development. EWR Co has taken into account effects on committed developments along each Route Alignment Option (assessment factor 14.14). Although Route Alignment 2 would serve the West Cambourne area, Bourn Airfield and All Angels Park development mentioned by respondents are both east of Cambourne. The emerging preferences at NSC, Route Alignments 1 and 9, connect to a North Cambourne Station location would only impact the north-eastern corner of the proposed Bourn Airfield development and it is considered most of the development could be delivered unimpeded. Therefore, this did not result in any differentiating factors in the assessment, as all route alignments were considered neutral. Development opportunities in St Neots: when compared to the Reference Case (Route Alignment 8) in relation to contribution to enabling housing and economic growth, Route Alignment 2 scored 'neutral'. This means that these alignments and associated stations were comparable in relation to the number of house developments enabled. In contrast, emerging preferred options Alignment 1 and 9 were considered 'minor improvements' against the Reference Case in relation to these factors, as it is considered that the land to the north of Cambourne North station would be more suitable for development. Preferred Alignment 1 (Tempsford variant), would also connect to Cambourne North. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant), ) better achieves the

### **Matter Raised EWR Co Response** Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Regarding support for connectivity between St Neots and Cambridge, Route Alignments 1, 2 and 6 would all provide this connection equally well. Should Alignment 2 have been chosen as the preferred alignment EWR Co would consider, alongside local councils and Network Rail, how to provide the best method of connecting a St Neots EWR station with current communities. The objective will be to minimise impact on St Neots and surrounding villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. Further information will be presented during statutory consultation. Support for Cambourne South: EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. For this assessment factor Route Alignment 2 scored 'neutral' and Route Alignment 1 which serves Cambourne North was judged as a minor improvement, against the Reference Case (Route Alignment 8). The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. Less visual impact/ would not require viaducts. Alignment 1, an emerging preferred option at NSC, has notably fewer landscape impacts than both the reference case and Route Alignment 2, due to avoiding impacts upon landscape designations at Brickhill Country Park, the River Great Ouse valley and indirect impacts upon the character of Roxton Park. It is not correct that Route Alignment 2 would not require viaducts. In fact, Route Alignment 2 has greater visual impacts than the reference case (Route Alignment 8). Overall, the visual impact from Route Alignment 1 would be less than Route Alignment 2. EWR Co's preferred alignment is Alignment

1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide

### Matter Raised EWR Co Response

Many respondents supported Route Alignment 8 for the new station at Cambourne South, and subsequent southern approach into Cambridge. Several support the "south-to-south" approach for its directness, which they say should mitigate some of the impacts of the line. Some also state the placement of the station in relation to Cambourne as similarly key to this, as this placement allows users from Cambourne to access the station without crossing a major road. Many respondents generally supported the choice of stations on this alignment. Several respondents support this alignment as it follows existing transport corridors, in particular the A421, as well as not restricting future development on the A428.

feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.

Route Alignment 8 runs south of the A428 and connects to Tempsford Station, south of the EWR St Neots station. However, Route Alignment 1 (an emerging preferred alignment at NSC) which runs from St Neots station and north of the A428 to Cambourne North generally performed better than Route Alignment 8, against the assessment factors. Route Alignment 1 performs well across the Assessment Factors, apart from journey time, but as locations that could support growth and new homes have been prioritised over faster end-to-end journey times, this has been identified as an emerging preferred option at NSC. EWR Co has considered the feedback from the 2021 consultation and concluded that the majority of Alignment 1 provides a better solution than the other routes presented for Section D between Clapham Green and The Everdens. However, EWR Co has identified a localised variation of this route which incorporates part of Alignment 9 to serve a potential East Coast Mainline station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant), ) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Preference for Cambourne South It is correct that route alignment options which serve a Cambourne South station would be more direct and provide shorter journey times than those which serve a Cambourne North station. The use of route alignments or route options close to major roads has been considered in the selection of a preferred Route Option and also in designing alternative route alignments. EWR Co acknowledges that there are potential benefits from building a new railway close to other transport infrastructure. Running EWR parallel to existing roads would allow the scheme to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to places. This could help to reduce some adverse impacts of the scheme such as visual changes to the landscape and potentially enable opportunity to combine landscaping and other environmental mitigation measures. However, Alignment 8 only follows the A421 for a short distance.

### **Matter Raised EWR Co Response** Further, route alignments serving Tempsford, which do not follow the A428 Improvement Scheme, cross the longest length of floodplain. Route alignment options serving St Neots which follow the A428 Improvement Scheme corridor (Alignments 1 and 2) perform better than the other options for both resilience and reliability considerations. In relation to walking and cycling, it is acknowledged that without mitigation Cambourne South stations (as per Route Alignment 2) would perform better than Cambourne North stations (as per the emerging preferred alignments at NSC, Route Alignments 1 and 9, and preferred Route Alignment 1 (Tempsford variant), ), as Cambourne North is north of the A428. However, the reduced connectivity of Route Alignment 1 is capable of being mitigated by various factors including the provision of a new foot/cycle bridge over the A428. Future bus routes, cycling and walking facilities and public transport in respect of Route Alignment 1 will be considered and information presented at the statutory stage of consultation. Existing population in the catchment area around Cambourne North will be slightly lower than at Cambourne South, but we would expect additional residential development to come forward around Cambourne North which will drive additional demand for EWR. It is acknowledged that a Cambourne South station performs slightly better that a Cambourne North station in terms of transport user benefits as it would not require pedestrians and cyclists to cross the A428. However it is expected that this can be mitigated in part through a new foot and cycle bridge over the A428. Station designs for Cambourne North will include provision for public transport interchange and active travel facilities and routes to maintain connectivity with Cambourne and neighbouring villages and communities. The emerging preferred options at NSC, Route Alignments 1 and 9, and preferred alignment, Alignment 1 (Tempsford variant), do not restrict future development particularly the A428 scheme as these options also run parallel to the A428 allowing the scheme to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to places. This could also help to reduce some adverse impacts of the scheme. Visual changes to the landscape would be concentrated in the A428 corridor rather than in areas not already subject to development, and there may be the opportunity to combine landscaping and other environmental

mitigation measures The design aims to reduce and mitigate the impacts on the developments at Bourn Airfield and Highfields Caldecote. Since the 2021 Non-

### **Matter Raised EWR Co Response** Statutory Consultation the design has been amended to avoid having a direct impact on the Linden Homes development at All Angels Park. EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far suggests that, on balance, development around the Cambourne North station would require fewer, or less significant, mitigation measures than around Cambourne South. In relation to mode shift benefits, a supporting consideration for Assessment Factor 1 (Transport user benefits), it is acknowledged that without mitigation Cambourne South stations (as per Route Alignment 8) would perform better than Cambourne North stations (as per Route Alignments 1 and 9), as Cambourne North is north of the A428. However, the reduced connectivity of Route Alignment 1 and 9 is capable of being mitigated by various factors including the provision of a new foot/cycle bridge over the A428. Future bus routes, cycling and walking facilities and public transport in respect of EWR Co's preferred alignment Route Alignment 1 (Tempsford variant), will be considered at the next stage of development for EWR. Existing population in the catchment area around Cambourne North will be slightly lower than at Cambourne South, but we would expect additional residential development to come forward around Cambourne North which will drive additional demand for EWR. Many respondents voiced concern about the potential for increased levels of noise from this alignment. In particular, several respondents remarked that the Increased noise and vibrations – specific impacts: EWR Co recognises noise and raised elements of the track would further exacerbate noise from the trains, as vibration from both the construction and operation of a railway is an important would the use of diesel trains. A small I number of respondents also claim the issue for local communities. At a later stage in the planning and development noise and vibration from both construction and operation would be felt more in process, EWR Co will develop a noise policy, which will set out a plan designed to their rural area as a result of the currently low levels of existing noise and establish and mitigate noise and vibration to avoid any significant adverse impacts vibration. on health and quality of life. EWR Co recognises concerns about the impact of noise and vibration and is committed to considering measures that will reduce noise and vibration. This includes: • Choice of trains • Track technology • Noise barriers – which form one of a number of mitigations that may be appropriate where tracks may create noise and vibration. Comprehensive assessments will be carried out and will use industry-leading computer modelling, which can

### **EWR Co Response Matter Raised** incorporate information on local geology to simulate potential noise and vibration impacts along the whole route as part of the assessments on any mitigations required. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include information regarding the existing baseline noise and vibration (where there were already vibration generating sources) environment, together with construction and operational noise limits having had regard to the appropriate guidance and legislation. Construction and operational noise levels generated from the proposed works will also be presented as part of the PEIR which will form elements to be considered at the statutory consultation. A full Environmental Statement will then be submitted as part of the DCO application. Additionally, further detail will be provided on the freight strategy, and the approach to avoiding or reducing potential noise and vibration impacts from freight trains which may run on EWR, during a phase of statutory consultation. Without any mitigation, Route Alignment 6 on its current horizontal alignment has the potential to create adverse noise impacts at the following communities: Clapham East, Clapham Park Wood, Woodlands Park, Graze Hill, Ravensden North-west, Lower Grange / Sunderland Hill, Wilden, Chequers Hill North, Wilden East, Duck's Cross, South Brook, Colesden, Spinney Road, Chawston, Chawston East, Abbotsley, Caxton, Lower Cambourne, Great Cambourne, Crow End, Caldecote, Kingston, Little Eversden. Route Alignment 1, an emerging preference at NSC, would adversely impact the same locations as Route Alignment 6, apart from Crow End, and would additionally impact Wintringham Hall, Highfields and Highfields Court. Both Route Alignments 1 and 6 would represent an improvement on the Reference Case (Route Alignment 8). Noise and vibration impact on historical buildings EWR Co has taken into account the potential noise impacts during both construction and operation during appraisal of the Route Alignments (assessment factor 14.13). While all route alignment options are expected to cause some adverse noise impacts on communities, Route Alignments 1, 2 and 6 each

represent a minor improvement to the Reference Case (Route Alignment 8) regarding noise impacts, due to a smaller number of dwellings potentially

### **Matter Raised EWR Co Response** affected. However, overall this was not on its own a differentiating factor. The impact of vibration from construction activity and operation of the railway on specific types of buildings has not been specifically assessed at this stage. EWR Co will take this into account for future assessments, should these properties be in the assessment corridor. A Project Noise and Vibration Policy will also be produced which will outline EWR Co's commitment to managing noise and vibration during construction and operation. The construction contractors who will build the scheme will be required to have due regard to the temporary construction-related adverse impacts in compliance with the Code of Construction Practice or equivalent document, and mitigation measures will also be put in place to reduce noise and vibration impacts as far as practicable. These may include the use of temporary screening and use of quieter or lower vibration construction methods and equipment. Noise from high viaducts and embankments It is correct that the vertical alignment of the railway, the types of train and the design of the railway and mitigation can affect the environmental consequences for noise. We will be carrying out comprehensive assessments and will use industry-leading computer modelling, which can incorporate information on local topography, sensitive buildings and receptors and geology to simulate potential noise and vibration impacts along the whole route as part of our assessments on any mitigations required. The assessments will form part of the environmental impact assessment to support our Development Consent Order (DCO) application. Similarly, mitigation measures that could be deployed will be common to all route Alignments and will be worked up in accordance with a noise policy in future phases of design for East West Rail, informed by the environmental impact assessment. Viaducts and embankments are needed on all Route Alignment Options. In any process of design, solutions to manage environmental impacts and cost mean that opportunities are sought to reduce the number of structures and heights of embankments. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges,

instead of building railway bridges/viaducts over existing highways. Lack of

Many respondents voiced concern about the potential negative impact of increased air pollution, in particular from the use of diesel trains and the proximity of the alignment to houses and schools. Many respondents also expressed concern about the adverse effects of pollution on their physical and mental health. Some respondents commented on visual and noise pollution from trains on embankments and viaducts. A few respondents commented that locating a station at Cambourne North, further away from residents of Cambourne, would encourage more people to drive to the station and cause additional pollution. A few other respondents also feel that this alignment would increase pollution in an already heavily polluted transport corridor, due to the existing A428.

### **EWR Co Response**

information on noise mitigations It is predicted that with appropriate mitigation, the communities subject to adverse noise impacts would reduce to: Graze Hill, Lower Grange/Sunderland Hill, Colesden, Spinney Road, Chawston, Crow End. Compared to the Reference Alignment, Alignment 6 would be close to fewer residential properties and therefore there would be lower noise impacts. A project Noise and Vibration Policy will also be produced which will outline EWR Co's commitment to managing noise and vibration during construction and operation. The construction contractors who will build the scheme will be required to have due regard to the temporary construction-related adverse impacts in compliance with the Code of Construction Practice, and mitigation measures will also be put in place to reduce noise and vibration impacts as far as practicable. These may include the use of temporary screening and use of quieter or lower vibration construction methods and equipment.

Air quality, diesel trains EWR Co has considered the potential adverse impacts to air quality as part of the environmental appraisal of Route Alignments (assessment factor 14.2, Air Quality).. All Route Alignment options would impact residential properties. Whilst Route Alignment 1 would bring the alignment closer to residential properties both in Highfields and Chawston, overall there would be significantly fewer properties impacted from this alignment compared to the Reference Case. Route Alignment 1 would also require less earthworks than the Reference Case. Route Alignment 1 is therefore considered a major improvement to this regard. All route alignments, as presented at NSC, would pass within 1km of between 35 – 41 schools, but none would pass within 250m of any school. This was therefore not a differentiating factor in choosing the preferred option. For the purposes of the air quality appraisal, it was assumed that the Scheme will operate using diesel-powered trains to allow the extent of potential air quality impacts to be understood. This assumption does not mean that other methods of propulsion (such as overhead electrification) will not be considered as the scheme develops. The next stage of design will be informed by the assumption that overhead electrification may be provided to ensure that the possibility of electrification is not precluded. EWR Co is committed to running a sustainable railway in the long term, with an ambition to be a net zero carbon railway. This includes the use of sustainable traction power in the long term. Diesel trains are being used to enable the opening of the first part of the railway between Oxford and Milton Keynes

### **Matter Raised EWR Co Response** sooner than would be possible with trains powered by other means, including electrification. This is because additional infrastructure, such as overhead line equipment, would be required for electric trains to operate, and battery-powered trains are still being developed to improve their range. As a result, diesel traction is the only viable option for EWR to achieve the necessary timescales. EWR Co is exploring how it can introduce new and emerging technologies, such as hydrogen power, in addition to electrification, into the long-term train fleet and infrastructure. EWR Co will be seeking input from bidders across the market to ensure they understand the company's environmental goals. EWR Co is developing the scheme in line with relevant laws and government policies, including the Clean Air Strategy, and will continue to consider impacts on air quality (including CO2 emissions) throughout the design process. EWR Co will develop a PEIR to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR will include information regarding the baseline air quality environment and identification of the relevant air quality standards and targets. The likely risks from construction activities and potential impacts from operation, including identification of mitigation and control measures will also be presented as part of the PEIR, which will form elements to be considered at Statutory Consultation. The PEIR will also include information about EWR Co's approach to traction power. A full Environmental Statement will then be submitted as part of the DCO application and will assess changes in nitrogen oxides (NOx), fine particulates (known as PM2.5 and PM10) and dust. This assessment will follow best practice and guidance such as the guidance set by the Institute of Air Quality Management and other recognised bodies. Health impacts Environmental impacts – and potential resulting impacts on human health – will be considered throughout the Project's development with the aim of avoiding and then reducing them where possible through the design. The impacts of the final route alignment on the health and wellbeing of local communities will then be assessed in a dedicated chapter of the PEIR published at statutory consultation, and then subsequently within the Environmental Statement, which will detail the mitigation to be provided where

appropriate. Visual and noise pollution, embankments Impacts from noise

### **Matter Raised EWR Co Response** pollution were taken into account in the environmental assessment which informed the Non-Statutory Consultation Technical Report (assessment factor 14.13). Route Alignment 1 was considered a minor improvement to the Reference Case (Route Alignment 8) as a slightly smaller number of dwellings would potentially be affected. Comprehensive assessments will be carried out and will use industry-leading computer modelling, which can incorporate information on factors such as local geology and track height, to simulate potential noise and vibration impacts along the whole route as part of the assessments on any mitigations required. Impacts on sensitive receptors such as schools will be assessed as part of this work. All route alignment options have the potential to cause adverse impacts on the rural landscape, and all include viaducts, embankments and other structures. EWR Co has considered these impacts as part of the environmental appraisal detailed in Appendix E of the Non-Statutory Consultation Technical Report. Route Alignment 1 would have notably fewer landscape impacts than the Reference Case (Route Alignment 8). This is due to avoiding impacts upon landscape designations at Brickhill Country Park, the River Great Ouse valley and indirect impacts upon the character of Roxton Park. Route Alignment 1 would cause negative visual impacts to Chawston from the A1 viaduct, but would have reduced visual impacts to other areas, such as settlements to the south of Cambourne. Overall, the landscape and visual impact from Route Alignment 1 represents a minor improvement on the Reference Case (Route Alignment 8), and this was a differentiating factor in the decision to choose Route Alignment 1 as an emerging preferred option at NSC. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant), ) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Viaducts and embankments are needed on all route alignment options, and while inclusion of these structures alone does not differentiate between Route Alignments, they are taken into consideration when assessing other impacts of the scheme, such as noise and vibration. In any process of design, solutions to manage environmental impacts

and cost mean that opportunities are sought to reduce the number of structures

### **Matter Raised EWR Co Response** and heights of embankments. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of a future public consultation. EWR Co is also carefully considering how the development can be designed to blend in with the local environment. This includes the consideration of where to create embankments and where viaducts are potentially required. Further examples of where visual impacts are being considered are the use of landscape earthworks to soften the appearance of embankments and integrate them into the wider landscape context or using sensitive placement of appropriate planting to either screen views from sensitive receptors, or to soften the appearance and presence of engineering earthworks. Location of Cambourne North – increased traffic Traffic and the potential for congestion around stations is expected to be the same for all station location options and will be further examined at the next stage of design. The proposed station locations, including Cambourne North are intended to serve future as well as existing residential areas, and travel modes to the new stations cannot yet be known. As such, this is not a differentiating factor. Regardless of the station location EWR Co will ensure that public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the design. Station designs for Cambourne North will include provision for public transport interchange and active travel facilities and routes to maintain connectivity with neighbouring villages and communities. When the final route alignment has been chosen, EWR Co will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. It

will also set out the impact of construction on the road network, including changes to existing traffic patterns because of predicted construction traffic. EWR Co will

Matter Raised	EWR Co Response
	prepare a Traffic Management Plan (TMP) that includes measures aimed at
	maintaining safety for road users and reducing the impacts of construction traffic.
	EWR Co will develop a PEIR to describe the likely environmental effects of the
	proposals. This process involves identifying potentially significant adverse impacts
	resulting from the proposals, allowing them to be avoided or minimised where
	possible, as well as identifying any potential beneficial environmental impacts. The
	PEIR, which will be presented at statutory consultation, will include information
	regarding the baseline for transport, access and non-motorised users, together
	with a preliminary assessment of impacts. This will be developed and refined for
	the Environmental Statement that is submitted as part of the DCO application.
Respondents expressed concerns regarding the impact to heritage assets, during	EWR Co has taken into account the potential impacts to the historic environment
both construction and operation. In particular, respondents identified potential	for each of the route alignment options, including built heritage (such as listed
adverse impacts on the historic environment from noise and vibration, both in	buildings), non-designated heritage assets, and the historic landscape. As far as is
their setting and potential direct impacts.	reasonably practicable EWR Co will aim to avoid harm to the setting of designated
	heritage assets, prioritising those of the highest sensitivity such as Scheduled
	Monuments, Grade I and Grade II listed buildings and parks and gardens. Where it
	is not possible to avoid impacts, appropriate mitigation measures will be
	incorporated into the design. Route Alignments 9 and 1, the emerging preferred
	alignments at NSC, are both in close proximity to significantly fewer listed
	buildings and Scheduled Monuments than the Reference Case (Route Alignment
	8). The Reference Case would pass within 1km of 232 listed buildings and 12
	Scheduled Monuments. Route Alignment 9 would pass 160 listed buildings and 11
	Scheduled Monuments, with Route Alignment 1 passing within 1km of 146 listed
	buildings and 10 Scheduled Monuments, the fewest of all route alignments. Both
	of these route alignments avoid the complex heritage resource area of Bourn
	Valley and are considered major improvements in this regard when compared to
	the Reference Case. In terms of conservation areas, Route Alignment 9 does not
	clash directly with any but would pass within 500m of six conservation areas,
	including Toft, Roxton, Harlton, Bedford and Great Barford. The total area of route
	that passes within 500m of these conservation areas is 474,762m2 which is
	considerably less than the Reference Case (Route Alignment 8). Route Alignment 1
	would pass within 500m of three conservation areas totalling 251,452m2, which is
	the lowest of all shortlisted route option alignments. Overall, both Route
	Alignment 1 and 9 represents a major improvement to the Reference Case (Route

### **EWR Co Response**

Respondents had a variety of concerns about the complex nature of construction, ranging from the challenges of construction, both in time and complexity, to the overall length of the railway. Respondents noted that the length and complexity of the routing of Alignment 1, which will need to route through several rural villages, would cause disruption. Some respondents mentioned the effects of construction on access to farms and existing infrastructure, such as roads and stations, as well as concerns about the challenges of installing the required infrastructure such as tunnels and crossings while maintaining this access. Several respondents were concerned about construction vehicles and potential damage to shallow depth drainage and critical local infrastructure. In particular, the potential severing of irrigation mains is a concern for farmers who state that — as well as the line cutting across farmland, making land uneconomical to farm — any severing of irrigation mains would result in crops failing. Several respondents were concerned about the

Alignment 8), with regard to impacts to the historic environment. EWR Co has also taken into account the potential noise and vibration impacts of each route alignment option. Further details of this can be found in the Noise and Vibration section below. During construction, work will be undertaken within the constraints of the Code of Construction Practice (CoCP), or an equivalent document, which will be agreed with the Planning Inspectorate. The CoCP or equivalent document will set out measures to help control construction-related impacts including noise and vibration, such as the use of quieter or lower vibration construction methods and equipment. In terms of visual impacts, EWR Co is considering how the development can be designed to blend in with the local environment through measures such as landscaping and screening to reduce visual intrusion. Consideration will be given to the setting and context of historic and cultural assets including conservation areas, archaeology, listed buildings and structures, historic views, and landscapes. As far as is reasonably practicable EWR Co will aim to avoid harm to the setting of designated heritage assets, prioritising those of the highest sensitivity such as Scheduled Monuments, Grade I and Grade II listed buildings and parks and gardens. In order to do this, early identification and surveys of those assets most likely to be affected will be carried out so the scheme can be designed to avoid these and where this is not possible, incorporate appropriate mitigation measures into the design.

Cost, programme risk, and complexity of construction (including elevated structures / height of design) EWR Co took into account the cost of construction in assessment factor 3. This assessment factor also looked at programme risk, and details of the complexity of construction for each Route Alignment option. Overall, Route Alignment 1 was considered a minor improvement in this regard compared to the Reference Case (Route Alignment 8). The design is based on proven construction practices that have been carried out successfully on other projects. It has been developed while taking account of the local environment. The station designs for St Neots has also been developed to use standard construction techniques, and EWR will work with Network Rail to ensure that their specific requirements are complied with. The amount and length of engineering works for the railway were considered in this assessment, with Route Alignment 1 requiring a shorter total length of structures and fewer earthworks than the Reference Case, having taken into account viaducts such as that at the proposed Black Cat

### Matter Raised EWR Co Response

excavation requirements of this alignment, remarking on safety issues with filling borrow pits and the stability of the ground.

Interchange near to Roxton. Although route alignment options with a station at Cambourne North are longer, a number of opportunities were identified in providing a route in this location, including an increased opportunity to enable economic and housing development, fewer demolitions of private property, less drainage infrastructure, and shorter lengths in floodplain (see paragraphs 9.3.3 – 9.3.4 of the NSC Technical Report). EWR Co continues to explore the use of tunnels for the scheme during the design process, but only considers them to be a practical option in specific areas where they can provide a potential solution for addressing constraints (like crossing roads, public access, environmentally sensitive areas). This is partly because they are more complex and expensive to build, operate and maintain than above ground structure. Tunnels also require additional land for ventilation and exit provisions in case of emergency as well as pumping and drainage system to deal with groundwater flows. With regard to construction programme, this was not a differentiating factor in the assessment as there is no material difference identified between the Route Alignment options, and Route Alignment 1 is considered neutral in terms of programme risk compared to the Reference Case. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co is also carefully considering how the development can be designed to blend in with the local environment. This includes the consideration of where to create embankments and where viaducts are potentially required. Further examples of where visual impacts are being considered are the use of landscape earthworks to soften the appearance of embankments and integrate them into the wider landscape context or using sensitive placement of appropriate planting to either screen views from sensitive receptors, or to soften the appearance and presence of engineering earthworks. Overall, the landscape and visual impact from Route Alignment 1 represent a minor improvement on the Reference Case (Route Alignment 8), and this was a differentiating factor in the decision to choose Route Alignment 1 an emerging preferred option at NSC. EWR Co has considered

### **Matter Raised EWR Co Response** the feedback from the 2021 consultation and concluded that the majority of Alignment 1 provides a better solution than the other routes presented for Section D between Clapham Green and The Eversdens. However, EWR Co has identified a localised variation of this route which incorporates part of Alignment 9 to serve a potential East Coast Mainline station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant), ) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of a future public consultation. Where they are considered to influence the alignment topics such as construction traffic and vehicles, effects on existing drainage, severing of irrigation mains and critical local infrastructure have been considered and where appropriate taken into account for the Route Alignment Options (e.g. identifying key highways). These will continue to be assessed during the project so that mitigation can be designed (drainage, irrigation and reservoirs, effects on agriculture, construction impacts, access to the existing St Neots Station) in greater detail. The topics were not considered to differentiate between route alignments. Disruption during construction: While impacts to communities will occur to some extent for all route alignments, EWR Co is committed to ensuring so far as reasonably practicable that the project is able to mitigate disruption during the planning, construction and operation of the scheme. EWR Co will prepare a Code of Construction Practice (CoCP) or an equivalent document for the Project, which will explain the steps that will be taken to manage construction activity in a way that reduces disruption to local people, communities and the environment as far as is reasonably practicable. EWR Co's approach to construction and operation of the railway, and further details of potential effects of this, will be provided during the statutory consultation. Impact on strategic road network EWR Co will prepare a Transport Assessment to consider the impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public

transport. It will also set out the impact of construction on the road network,

## **Matter Raised EWR Co Response** including changes to existing traffic patterns because of predicted construction traffic. This assessment will include consideration of local and strategic roads including the A1 and A428. EWR Co will also prepare a Traffic Management Plan (TMP) that includes measures aimed at maintaining safety for road users and reducing the impacts of construction traffic. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts. The PEIR which will form elements to be considered at the statutory consultation, will include information regarding the baseline for transport, access and non-motorised users, together with a preliminary assessment of impacts. This will be developed and refined for the Environmental Statement that is submitted alongside the DCO application. Impact on utilities and irrigation infrastructure Utility works will conform to the appropriate regulatory and statutory clearances and distances, with works carried out in accordance with health, safety, and construction legislation, as well as relevant technical standards and guidance. Utility diversions, protection and the relocation of farm irrigation infrastructure may be required but these works would be relatively short in duration. EWR will work with landowners whose farm water supply reservoirs and associated irrigation system is significantly impacted to ensure that a comparable supply is maintained during construction. Where we need to reach agreements with landowners, utilities operators or any other third parties, EWR Co will seek to do so through relevant legal agreements, protective provisions or within Statements of Common Ground. Impact on farmland including severance: while EWR Co may impact agricultural land and access for farm vehicles during construction, we will seek to reduce and mitigate potential impacts by working closely with landowners as designs progress. EWR Co will seek to ensure that access to severed land for farmers and farm vehicles is maintained during construction. EWR Co will develop a Preliminary Environment Information Report (PEIR) to describe the likely adverse and beneficial environmental effects of the proposals. This process involves

identifying potentially significant adverse impacts resulting from the proposals,

#### **Matter Raised EWR Co Response** allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts and likely beneficial effects. Potential impacts and likely effects on agricultural and forestry land use and agricultural land holdings arising from land-take, demolitions of key agricultural infrastructure, severance and changes in accessibility will be included in the PEIR, which will be presented at statutory consultation. A full Environmental Statement will then be submitted as part of the DCO application. Safety (including borrow pits) Construction safety (assessment factor 13) was not considered a differentiating factor, with no significant safety risks being identified that would prevent any of the alignments from progressing. Route Alignment 1 has significantly shorter lengths in floodplain than the Reference Case (Route Alignment 8), and also avoids the area of exposed Ampthill clay. In relation to Borrow pits, work carried out since the conclusion of non-statutory consultation has demonstrated that all alignments can be served by appropriately located borrow pits. There is nothing to suggest that any alignment would pose a materially greater risk. The detailed design will be carried out in accordance with recognised industry standards published at the time of detailed design to provide a high level of safety. EWR will continue to adapt the design to incorporate advances in design and technology that emerge in the future. During construction, EWR will ensure that health, safety, and wellbeing performance meets and exceeds minimum legal requirements and industry best practise. The CoCP or equivalent document sets out additional standards to maintain safety and security. Interface with the A428 Black Cat improvement scheme; benefits of shared travel corridor EWR Co is working closely with other projects including the A428 to manage interfaces between these projects. Alignment 1 would run parallel to the A428 Black Cat improvement scheme for approximately 12km and pass in close proximity to the works at Black Cat roundabout. As stated in paragraphs 9.5.34 – 9.5.40 of the NSC Technical Report, all of the shortlisted route alignment options (other than Route Alignment 8) would have some degree of interaction with the A428 Improvement Scheme, and this was not a differentiating factor. Running EWR parallel to the A428 would allow the scheme to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to places. This could

also help to reduce some adverse impacts of the scheme. Visual changes to the landscape would be concentrated in the A428 corridor rather than in areas not

#### **Matter Raised EWR Co Response** already subject to development, and there may be the opportunity to combine landscaping and other environmental mitigation measures. Concern that parts of the route would sever the entrance to the C2C station which could hinder the proposed travel hub. EWR Co is seeking to maintain existing highway connections and existing bus routes wherever feasible, including the C2C route. Where it is not feasible to retain bus routes on their current routes, EWR Co will ensure that a suitable alternative is available which minimises the impact on users. EWR Co will consult in more detail on these proposals at the Statutory Consultation and are liaising with C2C so that design interfaces between the schemes can be appropriately managed and opportunities explored. Against locating a station at Cambourne North as it would facilitate urban sprawl. EWR Co has considered the potential for coalescence of smaller villages along the route, due to an increase in development. As stated in paragraph 9.6.28 of the non-statutory consultation Technical Report, a station at Cambourne North, and the subsequent housing and economic development, is expected to be able to retain separation from and between existing settlements. Effects upon the identity of smaller villages and towns as a result of development is a matter for the assessment of those developments and not EWR. Several respondents were concerned about the impact on the new developments i.e., at Bourn Airfield and Highfields Caldecote. They felt that the viaduct, and the EWR Co has taken into account potential effects on committed developments along each route alignment (assessment factor 14.14). The design aims to reduce start of the embankments, were proposed to be on land identified for high density housing such as flats, as well as recreation facilities for the community. These and mitigate the impacts on the developments at Bourn Airfield and Highfields respondents felt that the visual impact on, and the severance of the entrance to, Caldecote. Route Alignments 1 and 9 would only impact the northeast corner of the proposed Bourn Airfield development and it is considered most of the this new community would be unacceptable. development could be delivered unimpeded. Since the 2021 consultation the design has been amended to avoid having a direct impact on the Linden Homes development at All Angels Park. Any additional mitigation required will be considered in later phases of project development. Visual impact on new developments EWR Co will consider how the scheme can be designed to blend in with the local environment. Visual impacts of the final route alignment will then be assessed as part of the Environmental Statement, which will be developed with the input of stakeholders. This will enable suitable mitigation to be designed and included where appropriate when the scheme is constructed, such as landscape

Matter Raised	EWR Co Response
	earthworks or sensitive placement of appropriate planting to soften the
	appearance of embankments.
Several respondents claimed this alignment would generate less noticeable noise	
than other alignments, as a result of being further from residential areas and using	Noise: noise and vibration impacts were considered in the environmental
cuttings.	appraisal as part of assessment factor 14.13 (Noise and vibration), as detailed in
	Appendix E of the NSC Technical Report. Noise impacts to communities are
	inevitable due to the scale and nature of the development. With appropriate
	mitigation the number of communities subject to potential adverse noise impacts
	from Route Alignment 1 would be reduced. This represents a minor improvement
	relative to the Reference Case (Route Alignment 8) due to the smaller number of
	dwellings potentially affected. This is helped by the fact that Route Alignment 1
	follows the existing transport corridor alongside the A428. Comprehensive
	assessments will be carried out and will use industry-leading computer modelling,
	which can incorporate information on local geology to simulate potential noise
	and vibration impacts along the whole route, including on residential buildings, as
	part of the assessments on any mitigations required. EWR Co will develop a PEIR
	to describe the likely environmental effects of the proposals. This process involves
	identifying potentially significant adverse impacts resulting from the proposals,
	allowing them to be avoided or minimised where possible, as well as identifying
	any potential beneficial environmental impacts. The PEIR will include information
	regarding the existing baseline noise environment, together with construction and
	operational noise limits having had regard to the appropriate guidance and
	legislation. Construction and operational noise levels generated from the
	proposed works will also be presented as part of the PEIR which will form
	elements to be considered at statutory consultation. A full Environmental
	Statement will then be submitted as part of the DCO application.
Several respondents expressed support for Alignment 9 as they felt this would be	Route Alignment 9 is considered to be neutral in terms of cost when compared to
cheaper than other route alignment options. Some respondents remarked that	the Reference Case (Route Alignment 8). Route Alignments 1 (the other emerging
this alignment would be particularly short and direct, meaning rail journey times	preferred alignment at NSC alongside Route Alignment 9) and 6 represent the
could be shorter than on other alignments. They also felt this will make it cheaper	options with the lowest capital cost (Assessment Factor 3), with cost differences
to build.	expected to be more than 10% lower than the cost of the Reference Case. This is
	based on engineering design at this stage, with operation & maintenance costs,
	land and property, risk and any inflation beyond 2019 excluded from the
	calculation for this assessment factor. The amount and length of engineering

#### **Matter Raised EWR Co Response** works was considered in this assessment, with Route Alignments 1 and 9 requiring a shorter total length of structures and less earthworks that the Reference Case. With regard to journey times, Route Alignment 9 would represent one of the longer journey times, being nearly two minutes longer that the Reference Case (Route Alignment 8). These journey time related assessment factors (assessment factors 1, 6 and 7) are weighed up against other assessment factors such as environmental impact and affordability to arrive at the project's decisions. Consequently, all options to optimise journey time have been/are considered at all stages in the design of the railway system. Several respondents offered suggestions for this route alignment. These included: Parking/ traffic measures in Cambourne Respondents have suggested preventing Preventing access through Cambourne to travel to the station by using signposts access through Cambourne to travel to the station location. For Route Alignment at the entrances to the village as well as automatic number plate recognition. 8, the station location proposed is at Cambourne South. Following assessment of Suggestion that sufficient, affordable parking is required at Cambourne South all options it has been established that a station at Cambourne North would station Suggestion of adding traffic measures (such as ANPR) on key roads around perform better overall. Emerging preferred options at NSC, Route Alignments 1 Cambourne to prevent it becoming overloaded by traffic traveling to the station and 9, and preferred route alignment, Alignment 1 (Tempsford variant), serve a Constructing cycle and walking routes to Tempsford station, and arranging for bus station at Cambourne North, which is served by the larger roads such as the A428. connections to serve surrounding villages; and Need for additional cycling and We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to walking infrastructure to both Tempsford and Cambourne South stations. It was suggested that new public transport links would be required to increase improve facilities, including interfaces and interchange with bus services at accessibility of Tempsford station. stations and providing onward travel information. Car parking provision will be considered, however, a decision on the charging strategy has not been made. EWR Co will consider traffic impacts and mitigations as part of traffic and transport assessments. EWR will undertake a Transport Assessment of impact on the strategic and local highway networks, road safety, and local sustainable modes of transport, including public transport. Outcomes of this will be reported in the Preliminary Environmental Information Report published at statutory consultation and the Environmental Statement submitted as part of the DCO Application. The assessment will consider impact of construction on the road network, such as changes to existing traffic patterns because of predicted construction traffic and the suitability of roads, including those around mentioned by respondents.

Following consultation with all the relevant highway authority or other bodies, EWR will prepare a Traffic Management Plan (TMP) that includes measures aimed at maintaining safety for road users and reducing the impacts of construction traffic. New public transport EWR Co will consider options for connecting the

## Matter Raised EWR Co Response

stations to the existing transport network and sustainable transport modes as part of the preparation for Statutory Consultation. Considering the overall visions described in the local plans, all the alignments are generally consistent with the visions for investment in public transport. Furthermore, the development of first mile/last mile strategies will be considered for preferred option Route Alignment 1 (Tempsford variant), to mitigate station connectivity issues. This was therefore not considered to be a differentiating factor for route selection.

Cycling and walking routes: respondents suggest constructing cycle and walking routes to Tempsford and Cambourne stations. EWR Co will ensure that public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our station designs. We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. Station designs for Cambourne will include provision for public transport interchange and active travel facilities and routes to maintain connectivity with neighbouring villages and communities. EWR Co will consider, alongside local councils and Network Rail, how to provide the best method of connecting an EWR station in the area between St Neots and Sandy with nearby settlements. The objective will be to minimise impact on surrounding towns and villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options.

Several respondents provided suggestions for this alignment. These included: 
Building a cycle path to service St Neots South station; 
Bolstering local bus services; and 
Using tunnels instead of viaducts. Need for additional cycling and walking infrastructure to both St Neots and Cambourne South stations Suggestion of including additional bus services to the stations to make them more accessible. Opportunity to use existing bus routes, adding stops at St Neots station Suggestion that St Neots station should be within walking distance from the city centre. Suggestion of adding traffic measures (such as ANPR) on key roads around Cambourne to prevent it becoming overloaded by traffic traveling to the station

Connectivity: one of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. Active travel, buses, and car parking We will promote and prioritise both active and sustainable transport modes, and will continue working with other organisations, including bus operators, to improve facilities, including interfaces and interchange with bus services at stations and providing onward travel information. Car parking provision will also be considered. Had Route Alignment 6 been selected, it would have been subject to refinement, including in

#### **Matter Raised EWR Co Response** Suggestion that tunnels could be constructed rather than cuttings, particularly at relation to first mile-last mile connectivity such as the provision of local bus the east side of Clapham. services and/or walking/cycling connections. Instead, EWR Co proposes to apply these measures in its further development of Route Alignment 1 (Tempsford variant), as the preferred alignment. It is not considered that including such refinements in Route Alignment 6 would have altered its position in relation to the other Route Alignments. Alignment 1 (Tempsford variant), is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. EWR Co is including the provision of CCTV covered secure cycle parking at each of its new stations which will be best placed to ensure optimum security for the cycles and a safe easy passage into the station for users. There are multiple options for cycle racks which EWR Co will consider for installation based on suitability, space required, demand, ease of use and feedback from representative groups as the options are assessed. EWR Co will consider the feedback for the provision of charging points for electric bikes in designs assessing local requirements and considering future proofing facilities for future changes in demand. EWR Co is considering the comments raised as part of the end-to-end journey, including the location and position of existing and new active travel corridors paths to encourage cycling and other active travel (walking and wheeling) to stations and among communities along the route. EWR Co continues to look for opportunities to improve infrastructure and facilities in and around stations and is keen to work with representative groups and local communities to provide a facility to provide safe and signposted cycle paths where possible. EWR Co is working with local authorities and bus operators to identify how local bus services can be integrated with the rail stations to best serve local communities. Future demand from the railway and housing developments can then be considered by bus companies and local authorities to assess demand for new and potential changes to routes served. St Neots Connectivity: with regard to St Neots station options and future development around the station, EWR Co has considered the potential coalescence with the existing St Neots area. This is also considered to be a risk at

Tempsford but is not considered as large as the risk at St Neots, as the Tempsford

#### **Matter Raised EWR Co Response** location is further away from the existing settlements. Should Alignment 6 have been chosen as the preferred alignment EWR Co would consider, alongside local councils and Network Rail, how to provide the best method of connecting a St Neots EWR station with the current town and ECML station and local communities. The objective will be to reduce impact on St Neots and surrounding villages while facilitating connectivity which could be achieved through new and enhanced footpaths, cycleways, and public transport options. Tunnels EWR Co continue to explore the use of tunnels for the scheme during the design process but only consider them to be a practical option in specific areas where they can provide a solution for addressing particular constraints. This is partly because they are more complex and expensive to build, operate and maintain than above ground structures, and also require additional surface structures for ventilation and exit in case of emergency. The inclusion of tunnels would not improve the position of Route Alignment 6 relative to other Route Alignments. Several respondents provided suggestions for this alignment. These included: St Neots station One of the key objectives of EWR is to enable sustainable housing Building a cycle path to service St Neots South station; Bolstering local bus and economic growth. The proposed EWR station locations have been chosen to support the delivery of new housing and help create new jobs along the corridor, services; and Using tunnels instead of viaducts. Suggestion that further options for St Neots East Station need to be explored. Suggestion that the location of the new as well as helping to ease some of the upwards pressure on the housing market. station should be as close to the existing St Neots Station as possible. Suggestion The majority of land within St Neots already contains housing and businesses and much of the land neighbouring the eastern side of the town is either already that the new station should preferably be in St Neots. committed or allocated for future development. Therefore, EWR Co's ability to support housing growth would be more effectively realised by constructing a new station between St Neots and Sandy rather than using the current station or relocating this further south as suggested. In addition, the ECML is nearly at capacity. Therefore, running additional EWR services on the ECML to the existing St Neot's station is unlikely to be possible from a capacity perspective. One of EWR's core priorities is to increase connectivity across the Oxford to Cambridge area. This includes consideration of local connectivity, bus services and customer experience while travelling to EWR stations within our station design work. EWR Co has considered the potential coalescence with the existing St Neots area. This is also considered to be a risk at Tempsford (i.e. with Tempsford, Everton, Little Barford and Sandy), but is not considered as large as the risk as St Neots as the Tempsford location is further away from the existing settlements. EWR Co will consider, alongside local councils and Network Rail, how to provide the best

Matter Raised	EWR Co Response
	method of connecting a St Neots EWR station with the current ECML station. The
	objective will be to minimise impact on St Neots and surrounding villages while
	facilitating connectivity which could be achieved through new and enhanced
	footpaths, cycleways, and public transport options. EWR Co's preferred alignment
	is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a
	station at Tempsford, where there is greater potential for development to support
	economic growth than at St Neots. This localised variant of Alignment 1 (known as
	Alignment 1 (Tempsford variant),) better achieves the project objectives and will
	therefore be taken forward as EWR Co's preferred route for further design
	development and assessment. Cycle path/ Public transport Had Route Alignment 2
	been selected as the preferred route alignment, it would have been subject to
	refinement, including in relation to first mile-last mile connectivity such as the
	provision of local bus services and active travel connections. Instead, EWR Co
	proposes to apply these measures in its further development of Route Alignment
	1 (Tempsford variant), as the preferred route alignment. EWR Co has considered
	the feedback from the 2021 consultation and concluded that the majority of
	Alignment 1 provides a better solution than the other routes presented for Section
	D between Clapham Green and The Eversdens. However, EWR Co has identified a
	localised variation of this route which incorporates part of Alignment 9 to serve a
	potential East Coast Mainline station at Tempsford, where there is greater
	potential for development to support economic growth than at St Neots. This
	localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant))
	better achieves the project objectives and will therefore be taken forward as EWR
	Co's preferred route for further design development and assessment. Residents,
	communities and other stakeholders will be able to provide feedback on the
	updated route design for Alignment 1 (Tempsford variant), as part of the statutory
	consultation. It is considered that adequate cycle path and public transport
	provision could be developed for all routes considered. Therefore even if such
	features had been included in Route Alignment 2, it would still have performed in
	the same manner against the assessment factors and this would not have altered
	its position in relation to the other Route Alignments. Future bus routes, cycling
	and walking facilities and public transport in respect of Route Alignment 1
	(Tempsford variant), will be considered at the next stage of development for EWR.

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	Further information on cycle paths and public transport will be available at the statutory consultation.
	Tunnels instead of viaducts: EWR Co continue to explore the use of tunnels for the scheme during the design process but only consider them to be a practical option in specific areas where they can provide a solution for addressing particular constraints. This is partly because they are more complex and expensive to build, operate and maintain than above ground structures, and also require additional surface structures for ventilation and exit in case of emergency. The inclusion of tunnels would not improve the position of Route Alignment 2 relative to other Route Alignments, including the NSC emerging preferences Route Alignment 1 and 9.
Several respondents raised concerns that this section of the project is too costly, and that the rail demands of the area do not justify this expense. These respondents claimed that the cost of the Project will be compounded by its difficult construction, caused by the terrain along Alignment 6. These respondents also expressed concern over the location of Cambourne South station, stating that there is not sufficient need for this station and citing concerns regarding the southern approach to Cambridge.	Cost of construction: in comparing capital costs of Route Alignment 6 and Route Alignment 1 (an emerging preferred option at NSC), both represent a capital cost improvement over Reference Case (Route Alignment 8). These cost differences are expected to be more than 10% lower than the cost of the reference alignment even when taking account of the terrain affected. As highlighted by respondents, Route Alignment 6, (as well as Route Alignments 5 and 2) encounters more excavation works, which inherently carry more risk. However, the additional excavation material broadly balances the fill import required.
	Reduction in passengers post Covid-19: EWR is part of the Government agenda to create a range of opportunities for people right across the area and help to spread prosperity across the UK. The Case for EWR is detailed in Chapter 2 of the NSC Technical Report. EWR is part of the Government agenda to create a range of opportunities for people right across the Oxford to Cambridge area and help to spread prosperity across the UK, and Section D of the route is considered crucial in achieving this. With regard to the impact of Covid-19, as detailed in paragraph 2.2.4 of the NSC Technical Report, the outbreak has significantly cut demand for rail travel in the short term. However, EWR would not enter into service until the end of the decade and the purpose of EWR is to enhance connectivity across the Oxford to Cambridge area as a whole and work is still ongoing to understand how the Covid-19 pandemic may affect commuter travel patterns over the longer-term. Latest statistics released by the Department for Transport (DfT) show that

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	national rail usage is currently around 80% of pre-covid levels
	(https://www.gov.uk/government/statistics/transport-use-during-the-
	coronavirus-covid-19-pandemic).
	Location of Cambourne South station: matters relating to the approach of EWR to
	Cambridge were addressed in Appendix F of the NSC Technical Report. EWR Co
	agrees that the optimum location for a station at Cambourne would be to the
	north of the settlement as this will be better sited in relation to prospective
	development. EWR Co considers that there is a need for a Cambourne station, as it
	offers a great opportunity to connect the growing population of Cambourne with
	environmentally sustainable transport and could integrate with proposed
	improvements to the local transport network in south Cambridgeshire. Locating a
	station at Cambourne will allow customers to connect between rail services and
	other transport modes, whether the existing bus network or future transport
	infrastructure such as the proposed CSC busway to Cambridge, without
	duplicating the public transport provision already made by or planned for those
	modes.
Several respondents supported this alignment because they state it will cost less	It is correct that Route Alignment 8 would not need to cross the A428. However, it
to build.	does need to cross the A421 and A1, and therefore not crossing the A428 in itself
	is not considered to mean that the whole route would be cheaper. The estimated
	cost ranges represent the capital cost order of magnitude costs for the core
	section. This is based upon the engineering design for non-statutory consultation,
	and includes costs for purchasing properties and land, including any
	compensation, costs of the required structures along the route alignments including bridges as well as pipeline crossings. The NSC design for Alignment 8
	would still need to cross a number of utilities such as pipelines, and these have
	been taken into account in the assessment of capital costs. EWR Co is in discussion
	with the relevant providers to determine either a diversion or protective measures
	for their services. None of the NSC Route Alignment designs required tunnelling.
	Route Alignment 8 has the shortest alignment length and is expected to have
	reduced journey times when compared to the emerging preferred route
	alignments at NSC, Route Alignment 1 and 9. However, it is not correct that Route
	Alignment 8 will cost less. As detailed in Table 9.2 in the NSC Technical Report,
	Route Alignment 8 is expected to include upfront capital costs of between £2.3 –

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Some respondents claimed that the length of Alignment 2 would increase journey times, while increasing disruption on the line. Several respondents voiced concern that this additional length, as well as the potential challenge in dealing with the gas pipelines in the area, could make the project overly expensive. Some respondents express concern about the complexity of parts of the Project, particularly St Neots South station, and the viaduct over the River Great Ouse. Several respondents expressed concern about the necessity for St Neots South station, as the town already has a station.

£2.5bn. Many of the other route alignment options are comparable in cost, but Route Alignment 1 and 6 are expected to include savings of up to £340m and £300m respectively when compared to Route Alignment 8.

Journey times: all options to optimise journey time have been and will continue to be considered at all stages in the design of the railway system. EWR Co aims to provide a frequent passenger service through designing a flexible railway, with two railway tracks for EWR service use throughout, allowing the new services to offer attractive journey times. The indicative target maximum journey times are based on indicative route and infrastructure studies and are being validated as the Project progresses. EWR Co has taken into account journey times in the assessment of route alignment options, as set out in within the Design Considerations sections 7 and 9 of the NSC Technical Report Appendix E. For short distance passenger services, Alignment 2 was judged as 'neutral' when compared to the reference case (Route Alignment 8). The journey time predicted for Route Alignments 2 at the NSC was 25 / 43 seconds quicker Eastbound / Westbound than the reference case, however, this slight difference was not considered to be significant and is represented as neutral for Transport User Benefits. For long distance passenger services (in terms of the strategic consideration of the extent to which EWR facilitates services beyond Oxford to Cambridge), the Bedford to Cambridge (short distance) journey time differences between the route alignment options were sufficiently small that it they would be unlikely to affect interchange opportunities at Cambridge. As a result, this was scored neutral across all options. As all alignments have the same length of the alignment that uses or neighbours existing lines, the length of Alignment 2 or any other alignment is not considered to be related to the risk of disruption to existing lines.

Gas pipelines in the area: all alignments, including Route Alignment 2 and the emerging preferred options at NSC, Route Alignments 1 and 9, cross major utility networks, including gas pipelines. These crossings have been identified and allowed for in our capital cost estimates, one of the Assessment Factors presented within the Design Considerations section of the NSC Technical Report Appendix E. While any diversion of major utilities is significant and has associated risks, it is usual for projects of this scale to have to deal with them and given that they are

## **EWR Co Response Matter Raised** common to some extent in relation to all alignments this is not a differentiating factor in favour or against Route Alignment 2. For further details refer to information on Pipelines within Roads and footpaths section, above. Cost In relation to overall affordability, Route Alignment 2 is not the cheapest route alignment nor is it the most expensive. Route Alignment 2 was assessed as 'neutral' when compared to the Reference Case (Route Alignment 8). Route Alignment 1 (an emerging preferred route at NSC) was assessed as a 'minor improvement' against the Reference Case. This means that the overall costs (including capital, operating, maintenance and renewal) would be lower for Route Alignment 1 than Route Alignment 2. Complexity of the Project: the design is based on proven construction practices that have been carried out successfully on other projects. It has been developed while taking account of the local context including topography, geology and environment factors. Although paragraph 9.4.9 of the NSC Technical Report acknowledges the complexity of construction of the St. Neots South Option A (due to it crossing the ECML at a greater skew angle compared to Option B), the early stage that the project is currently at would provide EWR Co, and its eventual chosen contractors, with a long lead-in time for construction to be able to properly plan and programme the construction in a safe and efficient way, in close consultation with Network Rail. Also, for this, and for the construction of the viaduct over the River Great Ouse, EWR Co would seek to appoint contractors with the necessary experience of constructing similar structures in other major infrastructure projects to ensure the safe and efficient construction of both complex elements. EWR Co took into account the cost of construction in assessment factor 3. This assessment factor also looked at programme risk, and details of the complexity of construction for each Route Alignment option. Alignment 2 was judged as Neutral in comparison to the reference case Alignment 8 for this assessment factor. Need for a St Neots station Enabling housing growth and contributing to transformational growth within the Oxford to Cambridge area is a key part of EWR's purpose. EWR Co aims to provide a frequent passenger service through designing a flexible railway, with two railway tracks for EWR

service use throughout, allowing the new services to offer attractive journey times. All NSC route alignment options would connect to six north-south routes,

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Suggestion that a speed limit should be put in place for certain sections of the route, to protect the tranquillity of nearby villages.	including provision for a potential new passenger interchange with the East Coast Main Line (ECML) at either Tempsford or St Neots (as a new station, not replacing the existing station). This would provide passengers going to and coming from destinations beyond the region with alternative options to the longer routes via London. The use of the existing station within St Neots is not expected to enable the same level of housing development as we anticipate would be unlocked by a new station between St Neots and Sandy, which is why the preferred location for an ECML station is south of the existing St Neots station. However, EWR is committed to increasing prosperity and connectivity across the area, and therefore options to efficiently connect existing communities, such as St Neots, with EWR remain important and we will continue to develop proposals to enable easy accessibility for these communities, including through the provision of improved first mile / last mile connectivity, to our proposed network. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. EWR Co has considered the feedback from the 2021 consultation and concluded that the majority of Alignment 1 provides a better solution than the other routes presented for Section D between Clapham Green and The Eversdens. However, EWR Co has identified a localised variation of this route which incorporates part of Alignment 9 to serve a potential East Coast Main Line station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant),) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consulta

Matter Raised	EWR Co Response
	railway is an important issue for local communities. At a later stage in the planning and development process, EWR Co will develop a noise policy, which will set out a plan designed to establish and mitigate noise and vibration to avoid any significant adverse impacts on health and quality of life.
Suggestion to relocate route South of Bedford to avoid villages and environmental damage. Suggestion to relocate route slightly further from villages/properties e.g. Abbotsley, Renhold, Tempsford. Suggestion to relocate route through the North of Cambridge to provide access to villages. General suggestion to seek new alternative routes due to environmental damage. Suggestion to run route along A421 or South of A428 to minimize proximity to villages and environmental damage. General preference of routes 1, 6 and 2.	South of Bedford/ North of Cambridge: responses regarding a northern approach to Cambridge are considered within Chapter 3. Likewise for responses regarding approaching Bedford from the south refer to Chapter 7. Proximity to villages Alignment 8 is likely to impact on residential properties in Roxton, Tempsford, Abbotsley, Caxton, Great Cambourne and Crow End. Regarding the suggestion to move the route further away from villages, as detailed in the Consultation Technical Report Appendix E – Project Section D Assessment Factor Tables (East West Rail, 2021) the NSC emerging preferred options Route Alignments 1 and 9 demonstrate a minor improvement to impacts to the community when compared with the Reference Case (Alignment 8). This assessment included details of the number of residential properties that are expected to be demolished. Route Alignment 8 is expected to require the demolition of eight properties, with Route Alignment 1 requiring the demolition of four properties, representing a minor improvement. This was one of the determining factors in the assessment which led to Alignment 1 being chosen as an NSC emerging preference, as stated in Section 9.8 in the Consultation Technical Report (East West Rail, 2021). In comparison, both Route Alignment 6 and Route Alignment 2 present a minor improvement relative to the reference case due to the slightly smaller number of dwellings potentially impacted. In developing our proposals, EWR Co has aimed to minimise the negative impact this may have on communities and in particular people's homes, including within Abbotsley, Renhold, Tempsford. Inevitably with an infrastructure project of this size, there will be some people who could be directly affected. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignment 9 between Bedford and Tempsford Station, EWR Co has developed Alignment 1 (Tempsford variant), . Alignment 1 (Tempsford variant), is a variation of Alignment 1, which deviates from Align
	Alignment 1 (Tempsford variant), would then follow the proposed route of

Matter Raised	EWR Co Response
	Alignment 9, which merges with Alignment 1 east of Little Barford and then runs
	to a station north of Cambourne. Alignment 1 (Tempsford variant), would
	significantly reduce and/or mitigate the potential impacts at Ravensden, Renhold
	and Roxton associated with Alignment 8 and 9. Residents, communities and other
	stakeholders will be able to provide feedback on the updated route design for
	Alignment 1 (Tempsford variant), as part of the statutory consultation. The use of
	route alignments or route options close to major roads has been considered in the
	selection of a preferred route option and also in designing alternative route
	alignments. EWR Co acknowledges that there are potential benefits from building
	a new railway close to other transport infrastructure. For example, the selection of
	an alignment that broadly parallels the route of the A428 dual carriageway being
	promoted by National Highways between Black Cat and Caxton Gibbet would
	allow the scheme to benefit from a 'shared travel corridor', meaning that it would
	cover a route used regularly to connect people to places. This could also help to
	reduce some adverse impacts of the scheme. Visual changes to the landscape
	would be concentrated in the A428 corridor rather than in areas not already
	subject to development, and there may be the opportunity to combine
	landscaping and other environmental mitigation measures. Comments received in
	response to both our 2019 and 2021 consultations have emphasised the
	importance that the public place on avoiding impacts upon these features where
	possible. EWR Co will continue to work to mitigate any impacts we cannot avoid
	and work closely with people who could be affected. It would be difficult for the
	new railway to be located in close proximity to the A421 and existing A428 roads
	because of the sensitive environmental features including floodplains and heritage
	assets, and existing settlements along these routes. For instance, this would mean
	that selecting an alignment in these areas would 'sandwich' villages between busy
	roads and the new railway, increasing the impacts on these local communities
	from the combined infrastructure.
Suggestions	At the 2021 consultation, Route Alignments 1 and 9 were identified as the
	emerging preferred alignments. EWR Co has considered the feedback from the
	2021 consultation and concluded that the majority of Alignment 1 provides a
	better solution than the other routes presented for Section D between Clapham
	Green and The Eversdens. However, EWR Co has identified a localised variation of
	this route which incorporates part of Alignment 9 to serve a potential East Coast

Matter Raised	EWR Co Response
	Mainline station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further
	design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation.
Suggestions: a considerable number of respondents offered suggestions for this alignment. These included: • Coordinating construction of the alignment with the planned A428 upgrade, to reduce length and level of disruption; • That new stations are served by buses, possibly with dedicated shuttle routes; • Making the stations at St Neots and Cambourne accessible for residents by walking and cycling; • Providing ample parking and cycle storage at the stations; • Placing the track in a tunnel instead of cuttings and embankments, to further reduce noise impacts of the line; and • Moving the track further north and west, to avoid Highfields Caldecote, Wilden and Bourn Airfield, as well as the Great Wood and the water tower at Sunderland Hill.	Avoiding existing houses and settlements such as Highfields Caldecote, Ravensden, Wilden, Linden Homes (Angel Park), Sunderland Hill In developing its proposals, EWR Co has aimed to minimise the negative impact this may have on communities and in particular people's homes, including Highfields Caldecote, Ravensden, Wilden, and Sunderland Hill. However, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. The design aims to reduce and mitigate the impacts on the developments at Bourn Airfield and Highfields Caldecote. Since consultation, the design has been amended to avoid having a direct impact on the Linden Homes development at All Angels Park. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of a future public consultation. Since consultation EWR Co has amended the design to run in cutting beneath the B1046 Comberton Road, between Comberton and Toft. This means with a minor realignment of the road it can be maintained to provide a direct connection between the two towns.

#### **EWR Co Response Matter Raised** Suggestion that the route should be altered to include a northern approach into Cambridge, to reduce the impact on existing and proposed housing and to avoid the need for engineering solutions (viaduct/embankments) that are required to traverse from Cambourne North to south: regarding the suggestion of moving the alignment further north in order to approach Cambridge from that direction, full assessments of the five route options were completed in 2019, including understanding and using the feedback from the non-statutory consultation in early 2019, where the question of the direction of approach to Cambridge was specifically addressed. Details of these assessments can be found in the Preferred Route Option Report (East West Rail, 2020). These assessments were carried out using the Assessment Factors that had been previously agreed with the DfT. The result of these assessments found that overall, Route Option E was the best performing and a southern approach to Cambridge was to be preferred. In the 2021 consultation, the question of approaching Cambridge from the north or south was the subject of a specific question. EWR Co also considers that the impacts of Route Alignment 1 in terms of Bourne Airfield, Wilden and Highfields Caldecott, are already reflected in its assessment and that this does not change the relative performance of the Alignment. This and other matters raised from the non-ctatutory consultation do not differentiate between the potential approaches to Cambridge. As a result, EWR Co's decision to select the Southern Approach to Cambridge as the Preferred Alignment has not changed. The Northern Approach to Cambridge is not a Preferred Alignment and will therefore not be presented at statutory consultation. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them, and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for

Alignment 1 (Tempsford variant), as part of the statutory consultation. Move route further north to avoid ancient woodland at Great Wood The potential

## **Matter Raised EWR Co Response** impacts to woodland have been taken into account in the assessment of route alignment options (assessment factor 14.5, Ecology and biodiversity), and Route Alignment 1 was considered to be a minor improvement compared to the Reference Case (Route Alignment 8). Route Alignment 1 would not result in impacts to confirmed and potential ancient woodland, and would not impact Great Woods Route. Route Alignment 1 would also avoid impacts to the water tower at Sunderland Hill. Moving the alignment further north would potentially impact on other designated sites, such as Tilwick Wood. S uggestion to move the route to avoid severing access to private land e.g. Toft Road in Hardwick, or the Tinsley Estate in Wyboston: EWR Co has considered the impact of the Project on existing highways, PRoWs and private access roads as part of the design and assessment of route alignment options, including roads mentioned by respondents such as Toft Road and the Tinsley Estate in Wyboston. EWR Co is seeking to maintain existing highway connections wherever feasible. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which reduces the impact on communities. As described in section 4.2.5 of Consultation Technical Report, EWR Co will consult in more detail on proposals for individual highways, PRoWs and private access roads at the Statutory Consultation. Suggestion for the railway to align with existing transport corridors, with the route amended to follow the corridors of the A421, the A428 improvement scheme and existing road, and the M11 The use of route alignments or route options close to these roads has been considered in the selection of a preferred Route Option and also in designing alternative route alignments. EWR Co acknowledges that there are potential benefits from building a new railway close to other transport infrastructure. For example, the selection of an alignment that broadly parallels the route of the A428 dual carriageway being promoted by National Highways between Black Cat and Caxton Gibbet would allow the scheme to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to places. This could also help to reduce some adverse impacts of the scheme. Visual changes to the landscape would be concentrated in the A428 corridor rather than in areas not already subject to

development, and there may be the opportunity to combine landscaping and

#### **Matter Raised EWR Co Response** other environmental mitigation measures. Comments received in response to both our 2019 and 2021 consultations have emphasised the importance that the public place on avoiding impacts upon these features where possible. EWR does not consider it would preferrable to locate the new railway in close proximity to the A421, existing A428 and A14 or M11 roads because of the sensitive environmental features and existing settlements along these route. For instance, this would mean that selecting an alignment in these areas would 'sandwich' these villages between these busy roads and the new railway, increasing the impacts on these local communities from the combined infrastructure. In particular, the areas south of Bedford and north of Cambridge host a significant number of sensitive environmental features which it would be difficult to overcome, including heritage assets, ancient woodland, floodplains and top grade agricultural land. Opportunity for the EWR route to integrate with the Bourn Airfield development as this has yet to be constructed EWR Co will work closely with the Bourn Airfield Development team to see how we can best integrate the schemes and limit any impact on that development – including by the use of cuttings, bridges or suitable tunnelling approaches. A new station at Cambourne could also offer benefits to the new residents at Bourn Airfield. Further information will be provided at statutory consultation. Suggestion to alter the route from North Cambourne, to approach Cambridge from the north via Northstowe, and to potentially extend to Oakington Specifically in relation to an alignment north of Cambridge, this is considered within Chapter 3. Suggestion to have route 1 alignment changed so that it stops at Tempsford station as there is greater potential for further housing development Regarding the suggestion for Alignment 1 to stop at Tempsford, this is a matter that has been given consideration by EWR Co. Route Alignment 1 performs most favourably in comparison to other Route Alignments. However, as it allowed EWR to serve a Tempsford ECML station location, Route Alignment 9 was also identified as an emerging preference even though it does not perform as well as Route Alignment 1. Following feedback received from the non-statutory consultation, particularly regarding potential impacts associated with Alignment 9 between Bedford and Tempsford station, EWR Co has developed Alignment 1 (Tempsford variant), . Alignment 1 (Tempsford variant) is a variation of Alignment 1, which deviates from Alignment 1 south of Colesden, then runs north of Roxton and

serves a Tempsford station location. To the east of Tempsford station, Alignment 1

#### **Matter Raised EWR Co Response** (Tempsford variant), would then follow the proposed route of Alignment 9, which merges with Alignment 1 east of Little Barford and then runs to a station north of Cambourne. Alignment 1 (Tempsford variant) would significantly reduce and/or mitigate the potential impacts at Ravensden, Renhold and Roxton associated with Alignment 9. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), , which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant), ) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Shared travel corridor would provide environmental benefits. Shared travel corridor would reduce construction costs and time. + A428 related suggestions: Suggestion for the alignment to run along the south/west side of the A428 to allow better connectivity with existing settlements. Integrated approach with the A428 proposals will help to create a significant strategic growth opportunity. Suggestion to work closely with A428 project to leave passive provision for EWR. Comment on design of A428 – outside of scope. Suggestion to Integrate proposed bike and footbridges over A428 into EWR design. Suggestion to work with A428 project to deliver digitally enabled corridor. Integrated approach with A428 proposals would reduce impacts on residents along the corridor. EWRs emerging preferred alignments at NSC 1 and 9, and both run in a transport corridor alongside the northern side of the A428 to help mitigate environmental impacts. This is also true of EWR Co's preferred alignment -Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. Running EWR parallel to the A428 would allow the scheme to benefit from a 'shared travel corridor', meaning that it would cover a route used regularly to connect people to

places. This could also help to reduce some adverse impacts of the scheme. Visual changes to the landscape would be concentrated in the A428 corridor rather than

#### **Matter Raised EWR Co Response** in areas not already subject to development, and there may be the opportunity to combine landscaping and other environmental mitigation measures. Locating the railway on the south-eastern side of the A428 improvement scheme would conflict with more housing, and further environmental assessments would need to be undertaken to understand the potential environmental impacts and conflicts with environmentally sensitive areas of such an alignment. It is also noted that EWR's preferred station location at Cambourne is on the north of the A428 so an alignment on the south-eastern side of the road would require a crossing of the road nearer Cambourne. EWR Co has taken into account the proposed A428 improvement scheme, and are working closely with key transport authorities including Network Rail and National Highways and other projects in the area including the A428 to manage interfaces and explore opportunities between these projects and stakeholders. EWR Co will ensure that public transport connectivity and the ability to use new and improved active travel modes are appropriately considered in the development of our stations and infrastructure designs. EWR Co is exploring ways to provide digital services and apps that will allow customers to plan, manage and pay for their entire journey, including other public transport modes such as buses and e-mobility hire, in a seamless manner in order to deliver an industry leading customer experience. Suggestion to include a bridge over Shrubbery Lane, to avoid severance of an essential road for residents of both Ravensden and Wilden Respondents suggested a bridge over Shrubbery Lane to reduce/avoid severance. The current design for Shrubbery Lane is that a bridge would be provided. Suggestion for the route to run from south of St Neots to south of Bedford, to align with the Wixams development, St Johns The suggestion for the route to run from south of St Neots to south of Bedford, to align with the Wixams development, St Johns is not compatible with the preferred route option, which uses the existing line from the Marston Vale Line into Bedford Midland. Wixams would require construction of a new connection between the Marston Vale Line and the Midland Main Line. We are working on local connectivity proposals, with a focus on first/last mile travel to and from stations and will consider how we can provide access to EWR stations from Wixams. Route options passing to the south of Bedford were considered before the selection of a

preferred route option in 2020. Route Option E was selected in part because it would deliver higher transport user benefits by serving Bedford Midland and

## **Matter Raised EWR Co Response** Bedford St Johns directly, providing convenient access to other rail services, transport modes, local homes and businesses and facilities such as Bedford Hospital. EWR's environmental review also highlighted that the area contains a significant number of sensitive or complex environmental constraints which would be difficult and expensive to overcome. Opportunity to use the existing railways, such as the East Coast Mainline, to reduce the need for additional land take: the ECML is nearly at capacity, with plans to maximise this already in place by the industry. Running additional EWR services on the ECML is unlikely to be possible from a capacity perspective. Additionally enabling housing growth and contributing to transformational growth within the region is a key part of EWR's purpose. The use of a station within St Neots is not expected to enable the same level of housing development as we anticipate would be unlocked by a new station between St Neots and Sandy, which is why the preferred location for an ECML station is south of the existing St Neots station, at Tempsford. However, EWR is committed to increasing prosperity and connectivity across the region, and therefore options to efficiently connect existing communities, such as St Neots, with EWR remains important and we will continue to develop proposals to enable easy accessibility for these communities, including through the provision of improved first mile / last mile connectivity, to our proposed network. Suggestion that tunnels could be constructed rather than cuttings, particularly at the east side of Clapham: EWR Co continues to explore the use of tunnels for the scheme during the design process but only consider them to be a practical option in specific areas where they can provide a solution for addressing particular constraints. This is partly because they are more complex and expensive to build, operate and maintain than above ground structures, and also require additional surface structures for ventilation and exit in case of emergency. Request from NFU to share survey data between Highways England and EWR to reduce duplication of survey locations and impacts on land. EWR Co is sharing relevant information with various local stakeholders including National Highways in order to inform our designs and reduce the number of surveys we need to undertake. Suggest the use of screening measures including, banks and fences. When the final Route

## **Matter Raised EWR Co Response** Alignment is chosen, EWR Co will prepare a Preliminary Environment Information Report (PEIR) to describe the likely adverse and beneficial environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or reduced where possible, as well as identifying any potential beneficial environmental impacts and likely beneficial effects. The PEIR will include information on noise pollution and visual impacts of the scheme and will be presented at statutory consultation. A full Environmental Statement will then be submitted as part of the Development Consent Order (DCO) application. During this process, appropriate mitigation will be identified and incorporated into the proposals, either as mitigation that is embedded within the design, or as mitigation within the Code of Construction Practice (CoCP) or an equivalent document to manage temporary construction-related environmental impacts. This may include measures such as temporary screening, or sensitive placement of appropriate planting to soften the appearance of embankments. Suggestion that a speed limit should be put in place for certain sections of the route, to protect the tranquillity of nearby villages Respondents suggested that speed limits could be put in place to protect the tranquillity of nearby villages. Noise impacts were assessed as part of the environmental assessment factors, and Route Alignment 1 was considered a minor improvement when compared to the Reference Case (Route Alignment 8). It is acknowledged that all route alignments would subject some communities to adverse noise impacts. The suggestion that speed limits should be imposed on EWR to preserve amenity and tranquillity are not a matter to be considered at this stage, or a matter which assists in differentiating between Route Alignments. Imposing lower speed limits than required by factors including track design would have a detrimental impact on journey times and other mitigation options such as screening and earth mounds are considered to be more appropriate than speed restrictions. Furter measures to mitigate environment impacts will be considered at the subsequent design phases of EWR. Cambourne station - connectivity/FMLM related suggestions: suggestion that active travel links (cycle lanes, pedestrian crossings) are provided between Cambourne and Cambourne North station, including a

cycle/pedestrian bridge over the A428. Suggestion that additional bus services

Matter Raised	EWR Co Response
	should be provided between the Cambourne North station and Cambridge,
	including connecting with the proposed GCP Busway scheme Opportunity for
	Cambourne North to become a travel hub, or 'parkway station', if sufficient car
	parking facilities are provided. This would reduce the need for a Park and Ride at
	Scotland Farm Regarding accessibility to the stations, while a station at
	Cambourne North would be separated from the current settlement of Cambourne
	by the A428, it is considered that this could be mitigated in part through the
	provision of new foot and cycle crossings over the A428. Also, there is potential
	for new housing development north of the A428, which would not be affected by
	such severance. It is also expected that any interfaces with a guided busway
	scheme serving Cambourne could be appropriately managed. Indeed, as noted,
	there are prospects for integrating transport around a new Cambourne North
	station. Future bus routes, cycling and walking facilities and public transport will
	be considered at the next stage of development for EWR. St Neots station –
	connectivity / FMLM related suggestions: Opportunity for existing bus routes to
	stop at St Neots station to increase accessibility. Opportunity for the station at St
	Neots to become a large transport interchange, with links to the A428, A1, A421
	and ECML Suggestion that active travel links (cycle lanes, pedestrian crossings) are
	included between St Neots station and the town centre One of EWR's core
	priorities is to increase connectivity across the Oxford to Cambridge area. This
	includes consideration of local connectivity, bus services and customer experience
	while travelling to EWR stations within our station design work. We will promote
	and prioritise both active and sustainable transport modes, and will continue
	working with other organisations, including bus operators, to improve facilities,
	including interfaces and interchange with bus services at stations and providing
	onward travel information. Car parking provision will also be considered. If the
	preferred alignment had connected with St Neots EWR Co would have considered,
	EWR Co would consider, alongside local councils and Network Rail, how to provide
	the best method of connecting a St Neots EWR station with the current town and
	station. The objective will be to minimise impact on St Neots and surrounding
	villages while facilitating connectivity which could be achieved through new and
	enhanced footpaths, cycleways, and public transport options.
Suggested moving the alignment slightly to reduce impact on Kingston, Eversdens,	
Harlton and Haslingfield villages.	

#### **Matter Raised EWR Co Response** Minimising impact on home in the areas: in developing proposals, EWR Co will minimise the impact this may have on communities and in particular people's homes. However, inevitably with an infrastructure project of this size, there will be some people who could be directly affected. Compared to the Reference Alignment, Alignment 6 would be closer to fewer residential properties and there would be lower air quality and noise impacts. As the preferred Alignment 1 (Tempsford variant), (and the NSC emerging preferred alignments 1 and 9) is situated east of Toft it would have a reduced impact on Kingston, when compared to Alignment 6. The design for the preferred alignment Route Alignments 1A has been amended to mitigate impacts within the area of Eversdens, Harlton and Haslingfield villages. EWR Co has considered the feedback from the 2021 consultation and concluded that the majority of Alignment 1 provides a better solution than the other routes presented for Section D between Clapham Green and The Eversdens. However, EWR Co has identified a localised variation of this route which incorporates part of Alignment 9 to serve a potential East Coast Main Line station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. EWR Co will continue to work to mitigate any impacts we cannot avoid and work closely with people who could be affected. These respondents suggested that by being direct, this alignment would be cheaper, make construction quicker and journey times faster. Many respondents Damage and disruption: with regard to damage and disruption, as detailed in the felt this alignment will create less noise for the surrounding area. Many relevant sections above, EWR Co has taken into account environmental impacts, respondents supported this alignment as it would not require deep cuttings near impacts to communities, and property demolition in the assessment of route critical gas pipelines at Chequers Hill and Colesden. alignment options. Overall, Route Alignment 1 demonstrates a major improvement on environmental impacts compared with Route Alignment 8. As detailed in Appendix E of the NSC Technical Report, programme risk was a consideration under Assessment Factor 3. Programme risk is defined as the level of confidence in estimate of delivery time and scale of potential impact on entry into service date. In this regard Route Alignment 1, an emerging preferred

## **Matter Raised EWR Co Response** alignment at NSC, is considered neutral when compared to the Reference Case, as although it has a longer total track length it would also include shorter total length of structures and less earthworks. As a result, Route Alignment 8 is not anticipated to be quicker to construct and construction durations were not considered to differentiate between alignments. Impacts on villages. Based on the designs presented at NSC, we do not anticipate that Alignment 8 or the preferred Alignment 1 (Tempsford variant), would directly impact the village of Hardwick. We are committed to protecting the environment by finding approaches to delivery that avoid, reduce or mitigate negative environmental impacts and will continue to consider how we can best avoid impacts on these villages as we develop the design. Since consultation we have amended the design to run in cutting beneath the B1046 Comberton Road, between Comberton and Toft. This means with a minor realignment of the road a direct connection can be maintained between the two towns. EWR Co has taken into account the potential disruption of PRoW for each route alignment option, and all crossed PRoWs are assumed to be maintained or diverted. Based on the level of information available, this is expected to be a neutral impact for all Route Alignments. This is true for the North Bedfordshire Heritage trail, footpaths between Toft and Comberton, and Hardwick and Caldecote among others. Noise and Vibration: EWR Co has taken into account potential noise and vibration impacts of each route alignment option in the environmental appraisal detailed in Appendix E of the NSC Technical Report. Due to the scale and nature of EWR, noise and vibration impacts are inevitable and all route alignment options would impact some villages. Alignment 1, an emerging preferred option at NSC, would affect a fewer number of residential properties in terms of noise and vibration impacts (assessment factor 14.13) compared to the Reference Case (Alignment 8). Support for South Station EWR Co has taken into consideration a number of factors when assessing the different station location options, including potential housing delivery opportunities for each location, as well as a qualitative summary of potential housing deliverability challenges. Information will be presented at the statutory stage of consultation. This is discussed in the evaluation of assessment factor 2 in Appendix E of the NSC technical report. The evidence reviewed so far

suggests that, on balance, development around the Cambourne North station

#### **Matter Raised EWR Co Response** would require fewer, or less significant, mitigation measures than around Cambourne South. There will be significant planning work for each of the stations/local areas in the subsequent design stages in collaboration with local planning authorities. When designs for the proposed stations have been completed, these will be assessed against various factors. Further information will be provided during future stages of consultation. For the second non-statutory consultation, EWR Co undertook high-level assessments of the following factors to understand the potential of each station location for housing and economic growth: • The availability and suitability for development of land within close proximity to potential station locations and any constraints (for instance environmental considerations such as flooding or heritage assets); • Placemaking opportunities and constraints; • Relevant information from local plans and related local planning documents; and • Socio-economic factors. The findings from these high-level assessments were summarised in Technical Report in paragraphs 9.6.21 - 9.6.53, with discussion of the Cambourne South and North station locations found in paragraphs 9.6.21 – 9.6.38. Overall, EWR Co considers alignments serving Cambourne North (NSC emerging preferred options Route Alignments 1 and 9, and Preferred Alignment 1 (Tempsford variant), ) as being likely to perform better in relation to housing and economic growth than those serving Cambourne South. Further analysis will be developed to support this and presented at the statutory consultation. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), would also serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. There are several environmental and local heritage areas that have been identified in the vicinity of Cambourne South that would require appropriate mitigation to protect them: • Scheduled monuments and listed buildings, • Areas of woodland, priority habitat, and county wildlife sites, and • Cambourne Local Nature Reserve. As stated in paragraphs 9.6.21 – 9.6.38, a station at Cambourne South (as per

Route Alignment 8) would, when compared to a station at Cambourne North,

#### **Matter Raised EWR Co Response** require a greater level of mitigation to protect environmental and heritage assets in the area, including Scheduled Monuments and listed buildings, areas of woodland and priority habitat and county wildlife sites and Cambourne Local Nature Reserve. From a Planning perspective, this would place greater constraints upon development at Cambourne South than at Cambourne North. Alignments serving Cambourne North (Route Alignments 1 and 9) are therefore currently assessed as likely to perform better in relation to housing and economic growth than alignments serving Cambourne South (Route Alignments 2, 6 and 8). A station at North Cambourne would also not be expected to constrain development to the north of the A428, although it would be separated from the village of Cambourne. As all proposed route alignments and their associated stations would result in new elements in rural landscapes, EWR Co is considering how the development can be designed to blend in with the local environment through measures such as landscaping and screening to reduce visual intrusion. Consideration will be given to the setting and context of historic and cultural assets including conservation areas, archaeology, listed buildings and structures, historic views, and landscapes, and this would have included consideration of Bourn Windmill had Alignment 8 been chosen as a preferred option. EWR Co will seek to develop the landscape design to respond and reflect those features which make up the landscape character. Route Alignment 8 would be likely to result in several adverse impacts on water resources, in part due to its crossing of a groundwater Source Protection Zone (SPZ) south of Cambourne. This could potentially lead to adverse impacts on water resources as a result of the potential for contamination of the SPZ. Route Alignments 2, 4 and 6 that also serve Cambourne South, also cross the SPZ. A428 travel corridor Routing the alignment along the A428 travel corridor provides a number of benefits. It would reduce the amount of environmental impacts across the route, and also reduce the impacts to settlements and residents, as it would utilise a corridor that is already developed. Whilst the A428 may present a barrier to active travel options in accessing a Cambourne North station, it is considered that this could be suitably mitigated through a foot and cycle bridge over the A428. Furthermore, the development of active travel strategies will be considered for the preferred option to mitigate such matters. This was therefore not considered to be a differentiating

factor. Alignments serving Tempsford, which do not follow the A428 Improvement

#### **Matter Raised EWR Co Response** Scheme, cross the longest length of floodplain. In addition, Route alignment options serving St Neots which follow the A428 Improvement Scheme corridor (Route Alignments 2 and Route Alignment 1, an emerging preferred option at NSC) perform better than the other options for both resilience and reliability Considerations. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford, where there is greater potential for development to support economic growth than at St Neots. This localised variant of Alignment 1 (known as Alignment 1 (Tempsford variant)) better achieves the Project objectives and will therefore be taken forward as EWR Co's preferred route for further design development and assessment. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of the statutory consultation. EWR Co considers that impacts on communities could be reduced by routing EWR close to the existing travel corridor of the A428, as this would allow some adverse impacts to be concentrated in this corridor rather than in areas not already subject to development. This is reflected in the number of properties impacted, with emerging preferred alignments at NSC, Alignments 1 and 9, requiring the fewest demolitions (4 and 3 respectively) and Route Alignment 8 requiring a higher number (8). Alignment 1 would also affect a fewer number of residential properties regarding noise and vibration impacts (assessment factor 14.14). Route Alignment 1 is therefore considered a minor improvement compared to Route Alignment 8, in terms of community impacts (assessment factor 14.4) and noise and vibration (assessment factor 14.13). Pipeline Impacts It is recognised that Route Alignment 1, 2 and 6 would require a cutting in the vicinity of gas utilities near Chequers Hill. Gas utilities nearer Colesden are crossed by the railway at grade or embankment / cuttings. However, all route alignment options would have the potential to impact pipelines and other infrastructure, and this was not considered to be a differentiating factor. It is inevitable that in constructing a project of this type, some existing underground and overhead services (such as electricity, gas, water and communications) will need to be protect or relocated. This work is usually, but not always, undertaken in advance of the main construction works. EWR Co will engage with utility companies with

the aim of minimising any disruption that may be associated with utility works. Any works that are required in the vicinity of pipelines will be discussed and

#### **Matter Raised EWR Co Response** agreed with the asset owner, and appropriate mitigation measures put in place. Other benefits While Route Alignment 8 has the shortest core section alignment length at 37.9km, and would have reduced journey times when compared to the emerging preferred alignments at NSC, Route Alignments 1 and 9, as stated in the section above (Cost) it is not correct that Route Alignment 8 would be cheaper. As set out in the NSC Technical Report Alignment 8 was estimated to be £310m to £340m more expensive than Alignment 1 and £120m to £130m more expensive that Alignment 9. Due to the minor difference between the alignments in respect of journey times, this has not been considered to be a differentiating factor when compared to other alignments. The benefits that are demonstrated by Route Alignment 1, such as an increase in economic and housing growth opportunities, fewer environmental impacts, and others, are considered to outweigh the small additional journey time. EWR Co has considered the cost of construction and programme risk for each route alignment option (assessment factor 3, Capital costs). Complexity of construction is a factor in both cases. Route Alignments 1 and 6 represent the best options with regard to capital cost, with the differences expected to be more than 10% lower than the cost of the Reference Case (Alignment 8). This is based on the engineering design presented at NSC, and will be further scrutinised for the preferred alignment as the design develops. Programme risk (level of confidence in estimate of delivery time and scale of potential impact on entry into service date) is a smaller but still important consideration within the capital cost Assessment Factor. Assessment of this consideration took into account the amount of structural work (such as viaducts) required for each Route Alignment. All Route Alignments would require structural work, and the design for such works has been based on proven construction practices that have been carried out successfully on other projects. The designs have also been developed with consideration of the local context including topography, geology and environment factors. While Route Alignment 8 has the longest length of structures overall, Route Alignment 1 is considered to be neutral impact with regard to programme risk, so this is not a differentiating factor. Combining these considerations, capital cost was considered the most helpful differentiating factor in the overall judgement in relation to Assessment Factor 3

and was a key differentiating factor in the decision to choose Route Alignment 1 as an emerging preferred option at NSC. EWR Co's preferred alignment is

# Matter Raised

Viaducts and high embankments were a concern for several respondents, who remarked that noise and light pollution would be increased by having these structures on an already high point of land. These respondents also questioned the need for these structures on this this alignment. Some respondents mentioned the potential challenges and increased pollution caused by heavy freight trains needing to go up hills and suggest flatter areas in other route alignment options would address this. There are several concerns relating to the use of 10-15m viaducts and how these could visually impact and physically cut off some entrances to villages such as Highfields Caldecote. A few respondents also expressed concern about vandalism and anti-social behaviour as well as fears around potential safety issues that viaducts may bring to the area, such as the additional danger from the height of the track in the case of a derailed train, and how this will affect the community.

#### **EWR Co Response**

Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of a future public consultation. Operational costs (assessment factor 4) are considered neutral at this stage of design. This was calculated using track length, and while Alignment 8 represents the shortest track length (37.9km) this was not considered a significant differentiator. Energy use has not been assessed for the Alignments presented at NSC. However, a full Environmental Statement will be submitted as part of the development consent order application and will include a full whole life assessment of carbon emissions for the preferred alignment. This will include emissions during operation which will consider any energy use.

Impacts from noise pollution were taken into account in the environmental assessment which informed the Non-Statutory Consultation Technical Report (assessment factor 14.13). Route Alignment 1 was considered a minor improvement to the Reference Case (Route Alignment 8) as a slightly smaller number of dwellings would potentially be affected. Comprehensive assessments will be carried out and will use industry-leading computer modelling, which can incorporate information on factors such as local geology and track height, to simulate potential noise and vibration impacts along the whole route as part of the assessments on any mitigations required. Impacts on sensitive receptors such as schools will be assessed as part of this work, which will be published as part of the Preliminary Environmental Information Report during statutory consultation and presented in the Environmental Statement as part of the DCO application. The potential effects of light pollution from the railway will be considered as we develop our designs for the Project. This will include considering the location and layout of lighting in stations, maintenance compounds and new access routes and through the design we will seek to avoid impacts on "sensitive receptors", such as nearby residential areas or ecological habitats. As the scheme develops, opportunities will be sought to avoid and reduce potential noise and light pollution through the design of the preferred route alignment. We will develop a PEIR to describe the likely environmental effects of the proposals. This process involves identifying potentially significant adverse impacts resulting from the proposals, allowing them to be avoided or minimised where possible, as well as

## **Matter Raised EWR Co Response** identifying any potential beneficial environmental impacts. The PEIR will include information on a range of topics, including impacts relating to noise or light, and will be presented at statutory consultation. A full Environmental Statement will then be submitted as part of the development consent order application. Viaducts and embankments are needed on all Route Alignment options, and while inclusion of these structures alone does not differentiate between route alignments, they are taken into consideration when assessing other impacts of the scheme, such as noise and vibration. In any process of design, solutions to manage environmental impacts and cost mean that opportunities are sought to reduce the number of structures and heights of embankments. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of embankments and viaducts within the design. Opportunities considered include taking the railway under roads in cuttings instead of building viaducts over them and making minor diversions to the railway alignment to allow the railway to be lowered. Roads would then be diverted over the railway on smaller overbridges, instead of building railway bridges/viaducts over existing highways. EWR Co's preferred alignment is Alignment 1 (Tempsford variant), which is a variant of Alignment 1 to serve a station at Tempsford. Residents, communities and other stakeholders will be able to provide feedback on the updated route design for Alignment 1 (Tempsford variant), as part of a future public consultation. As stated in section 3.10 of the NSC Technical Report, the maximum gradient of the railway would be no steeper than 1 in 80 to reduce the risk of freight trains running at slower speeds. As all of the route alignments are designed to the same tolerances, use by freight services is not a differentiator. Safety: with regard to construction and operational safety (assessment factor 13), EWR Co has taken into account the safety risks of constructing large structures and working at height. This was not considered a differentiating factor, with no significant safety risks being identified that would prevent any of the alignments from progressing. Great Britain's railways are among the safest in the world and there is not considered to be a particular safety risk as a result of the design of a railway in any of the route alignments. The detailed design will be carried out in accordance with recognised industry standards published at the time of detailed

design to provide a high level of safety. EWR Co will continue to adapt the design

#### **Matter Raised EWR Co Response** to incorporate advances in design and technology that emerge in the future. The safety of workers, road users, non-motorised users (NMUs), supply chain and local people has been prioritised and considered throughout the design process (and will continue to be considered throughout construction, operation and maintenance) so that risks are identified and reduced wherever possible. During construction, EWR Co will ensure that health, safety, and wellbeing performance meets and exceeds minimum legal requirements and industry best practice. The CoCP or an equivalent document will set out additional standards to maintain safety and security. Compliance with the CoCP or equivalent document will be secured by the Requirements in the DCO. Vandalism and anti-social behaviour Precise Maintenance costs, including for repairs due to vandalism, have not been calculated at this stage and therefore all route alignment options have been scored neutral (under assessment factor 5, Overall affordability). However, there is not expected to be a significant difference for maintenance costs between the Route Alignments and maintenance costs alone are therefore not considered a differentiating factor. In developing the design of the permanent railway and temporary construction works. EWR Co will consider measures to avoid the potential for vandalism and anti-social behaviour, such as maintaining clear sight lines will be maintained around hoardings and fencing with no hidden corners in order to avoid, where reasonably practicable. Visual impact of structures and impacts to access and road network: EWR Co has considered the impact of the Project on existing highways, PRoWs and private access roads as part of the design and assessment of route alignment options, including access to Highfields Caldecote as mentioned by respondents. EWR Co is seeking to maintain existing highway connections wherever feasible, and Route Alignment 1 does not cut off access to villages including Highfields Caldecote. Where it is not feasible to retain existing highways, PRoWs and private access roads in their current location, EWR Co will ensure that a suitable alternative is available which minimises the impact on communities. In any process of design, solutions to manage environmental impacts (including visual impacts) and cost mean that opportunities are sought to reduce the number of structures and heights of embankments. Since consultation, EWR Co has been reviewing the design of the Section D route and looking for opportunities to reduce the height of

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	lowered. Roads would then be diverted over the railway on smaller overbridges,
	instead of building railway bridges/viaducts over existing highways. EWR Co's
	preferred alignment is Alignment 1 (Tempsford variant), which is a variant of
	Alignment 1 to serve a station at Tempsford. Residents, communities and other
	stakeholders will be able to provide feedback on the updated route design for
	Alignment 1 (Tempsford variant), at the statutory consultation.