



December 2018

Dear Sir/Madam

Re: HS2 Phase 2b working draft Environmental Statement

Thank you for providing Selby District Council with the opportunity to comment on the HS2 Phase 2b working draft Environmental Statement (WDES).

The Council is actively positioning Selby District at the heart of sub-regional and regional discussions around transport, connectivity and economic growth, and is keen to maximise the opportunities afforded by the delivery of HS2, as well as minimise any adverse local impacts. The importance of ongoing community engagement is stressed to ensure that those that are most impacted by the proposal are involved in a meaningful way.

The Council would like to make the following specific points with regards to the WDES and consider that issues relating to noise and landscape impacts are of greatest concern. These comments need to read in conjunction with comments provided by North Yorkshire County Council, relating to this section of the route.

Q1: What comments do you have on the information presented in the working draft Environmental Statement?

General Comments

In terms of the overall approach taken, Selby District Council strongly consider that HS2 should make it a priority to avoid significant impacts wherever possible by designing them out or through the relocation of operational and construction areas, where this is feasible. Mitigation of significant impacts should only be considered as a last resort, when all other options have been considered.

The consultation document is significant as might be expected with a project of this scale. The online navigation and guides provide a useful tool to aid navigation to the relevant sections, however, the consultation period for such a substantial document makes it extremely challenging to fully consider the information available in order to make a meaningful and informed response. The timescales are particularly challenging for consultees such as Local Authorities, where a multidisciplinary coordinated response is requested.

The main title of the document "*High Speed Rail (Crewe to Manchester and West Midlands to Leeds)*" appears to exclude the leg to the east of Leeds which travels through the Selby District wards of Barkston Ash, Church Fenton and Ulleskelf.

The maps contained within the WDES map books are of differing scales and orientations, which makes the document difficult to use and increases the likelihood of errors and inconsistency in the design and reporting of effects and mitigation. The absence of cross sections in the map books appears to be a serious omission and their inclusion would have greatly assisted in fully understanding the impact of the proposals.

Air Quality

Section 8.3 addresses Air Quality in terms of short term impacts from construction activities and longer term impact from the operational phase of the development. It is anticipated that impacts on Air Quality from construction activities will be controlled through the Control of Construction Practice (CoCP). It is agreed that the guidance documents specified are appropriate for the assessment and HS2's policy on vehicles emissions is welcomed, i.e. the use of Euro VI HGVs and Euro 4/6 petrol/diesel cars and LGVs, would be applied during construction of the Proposed Scheme. It is suggested however that a degree of flexibility is incorporated in to the ES, taking into account the proposed construction timetable the documents and standards referred to may well have been superseded by time construction commences.

Section 7 of the draft CoCP deals with Air Quality impacts general provisions, measures to reduce potential impact on air quality including dust and monitoring of Air Quality and dust. The measures, mitigation and monitoring are welcomed but are currently very general and high level. It is expected that site specific management plans will be developed and agreed to ensure that the general principles contained within the CoCP are achieved.

Archaeology

The WDES works on the assumption that any heritage assets within the land required for the construction of the scheme will be removed or demolished (Vol. 1, 8.8.13 & Vol. 3, 8.2.1). This goes against the standard practice of assessing route options and attempting to design out the most sensitive and significant areas. The basis for this type of pre-assessment is enshrined in the National Planning Policy Framework (para. 189).

The WDES sets out a strategy for the assessment of the impact of the proposal on heritage assets including archaeological and palaeo-environmental remains (Vol. 1, para. 8.81). The first part of this assessment is the collation of a range of existing documentary sources including the Historic Environment Record held by North Yorkshire County Council (NYCC), historic maps and aerial photographs (Vol. 1, para. 8.86). This will be supplemented by use of newly commissioned LiDAR surveys, site visits, surface artefact collection and geophysical surveys (Vol. 1, para. 8.87 & Vol. 2, LA16, para. 9.2.7).

Vol. 1, para. 8.88 states that archaeological survey work is being discussed with local authority archaeologists on a case-by case basis. This has not yet been the situation in Selby District / NYCC although the Council are currently working with HS2 to set up a meeting in this regard.

There is no objection to the survey techniques outlined above as an initial approach, however these types of non-invasive surveys are not normally sufficient to properly assess the significance of heritage assets of archaeological interest. Targeted trial trenching is advised to fully inform of this significance.

The WDES states that no intrusive site investigations have been undertaken as part of the baseline data collection (Vol. 1, para. 8.8.14) and that these would be undertaken at the pre-construction

stage or later. Without supporting data from intrusive surveys, e.g. trial trenching, it will not be possible to provide a reasonable assessment of significance.

Vol. 1, para 8.8.16 states that any field surveys are subject to land access and site conditions. This may mean that field survey of any form is not possible for parts of the route. This will form a constraint on the assessment of the impact of the scheme on heritage assets. Where survey has not been possible for logistical reasons this should be clearly set out in the ES.

The WDES states that a route-wide general written scheme of investigation: historic environment research and delivery strategy (GWSI:HERDS) has been prepared setting out the principles for research, investigation etc (Vol. 1, para. 9.8.3). Selby District Council have yet to be consulted on this document and therefore cannot comment on its suitability at this time.

Vol. 1, paras 9.8.3 & 9.8.4 correctly indicate that the resultants finds and other materials from archaeological mitigation will be properly archived. We are aware that many of the museums in the area are no longer able to accept new archives due to lack of capacity. As HS2 may generate a significant amount of archaeological material early engagement with the museum sector is recommended. Additional resources may be required by the museum sector, particularly in the form of additional storage. This issue was recently raised at a national level by John Howell MP and Lord Redesdale in a recent report:-

(http://www.appag.org.uk/future_arch_services_report_2014.pdf - para' 5.35-5.37).

The mitigation section of the WDES focuses very much on preservation by record. Opportunities for redesign or re-location, particularly of off-line facilities, such as site compounds and balancing ponds, should be considered where this can lessen the impact on the heritage assets.

Specific archaeological comments relating to the LA16 Community Area report are as follows. Archaeological comments on Vol. 1 apply to concurring paragraphs in Vol. 2:

Vol. 2, para's 9.3.6 and 9.3.7 ascribe values to the known heritage assets of archaeological interest. At this moment in time these value judgements are very subjective as the sites have not been subject to any form of field evaluation. This would preferably include both non-invasive and invasive techniques.

The Community Area report does not contain any discussion on the archaeological potential of the area over and above the known heritage assets. The narrative presented in the Historic Environment Overview (para. 9.3.9 - 9.3.23) is useful but could go further in attempting to predict the likely archaeological resource based on the underlying geology and known heritage assets.

Vol. 2, paras. 9.3.5 & 9.4.18 identify a former Friends' Burial Ground (MNY10809). This was not noted during the installation of the Asselby to Pannal gas pipeline which bisected the site as depicted on Ordnance Survey mapping. There is therefore some doubt as to the exact location and therefore the level of impact.

Vol. 2, 9.4.21 describes the site of the former Church Fenton Brick and Tile Works. This is assessed as being of low value. The route of the line passes partly over the clay extraction area and also bisects the former factory buildings which would include kilns and other industrial features. These are of a higher value than stated.

Conservation & Design

The main issues are the following with respect of conservation and design issues:

CT-06-500 to CT-06-503

The limestone ridge in this area is extremely important both historically and archaeologically. The area contains one of the largest concentrations of protected parks and gardens in the region. There are also legible patterns of listed buildings associated with earlier settlement patterns. The area is also designated as a Locally Important Landscape Area. The proposed line runs over this landscape, raised on an embankment, despite this area of land being higher than any other topography for miles around. It is unclear why this design solution is proposed and it appears that not sufficient consideration has been given to the impact of the railway within this highly important landscape.

CT-06-501

The line will run in close proximity to Huddleston Hall which is a Grade II* Listed building at risk along with other associated structures. The line will run upon the ridge to the north within the primary frontage view of the hall. When asked in an earlier meeting, HS2 advised that the hall faces south and so the line would run behind the hall – and therefore reducing the impact on the hall. However, a site visit undertaken by Selby District Council has confirmed that the hall directly faces the proposed line and as such it is in danger of being more significantly harmed. If the impact upon the hall is too great, it could preclude efforts to bring the building back into a sound state of repair and this is a serious concern.

CT-06-503

Barkston Ash contains several Listed Buildings and is historically important, due to the good survival of buildings and structures. The line will be close to the village and although impact could be minimised, details of the height of the railway and associated paraphernalia need to be understood for a more thorough assessment to be made.

CT-06-504 to CT-06-505

If the need for a viaduct at Church Fenton is unavoidable, then the structure will introduce a substantial element into the landscape which will need to be understood. The introduction of a viaduct provides the opportunity to provide a structure of high quality design to mark the beginning / end of the line.

Ecology

The WDES has been prepared without habitat and species survey work having been carried out, this means that a full detailed impact assessment has not been carried out and any mitigation or compensation measures cannot be measured in terms of achieving net gain for biodiversity.

Overall along the length of LA16 within Selby District there currently appears to be a net loss for biodiversity, as such there is a need to increase the areas of land for mitigation and compensation and to include sufficient enhancement measures to demonstrate that the scheme can achieve a net gain for biodiversity as required currently within national policy. This is likely to require off site provision of habitats that are suitable to the local area that can be managed in the long term. It is important that HS2 identifies these areas and assesses the current value of them before designing suitable enhancement measures.

Having reviewed the maps of the LA16 area in Selby District, specific ecological comments are provided as follows:

CT-05-500 – the plan shows the railway on embankment traveling west-east between two ancient woodlands Ringhay Wood to the north and Daniel Hartly’s Wood to the south – whilst the woodlands themselves remain unaffected species connectivity between the woodlands and hedgerow network will be severed by the scheme. The issue of collision by bats and birds will need to be considered in this location. Plan CT-06-500 shows no mitigation or compensation for these impacts with minimal planting provided on the railway embankments. This area would be an ideal location to provide broadleaved woodland compensation connecting the woodlands and providing continuation of habitat for species using the woodland network.

CT-05-501 – the route in this area will result in the loss of part of a woodland known as Middle Fox Covert which from CT-06-501 does not appear to have been compensated for.

CT-05-502 & CT-06-502 – the infrastructure in this area will lead to an isolated parcel of land between Coldhill Land and the two railway lines. In considering options for this area the restoration of Copley Lane Quarry should be taken into account as the area overall has the potential to provide semi natural habitat of value to biodiversity.

CT-05-503 & CT-06-503 – the area of development in this location crosses a number of watercourses and there are records of water voles from these. Mitigating impacts upon water voles and maintaining connectivity will be important considerations in this location. Apart from planting on the embankment there is no mitigation or compensation areas provided in this location. Given the proximity of the railway to the community of Barkston Ash this is a location where ecological mitigation/compensation could be linked with green infrastructure requirements and public rights of way to benefit people and wildlife.

CT-05-504 & CT-06-504 – there are large areas of land associated with works in this location where the railway on embankment becomes the Church Fenton viaduct. Opportunities to minimise impacts upon semi natural habitat should be taken, particularly where temporary impacts are involved. Some woodland habitat creation is mapped in the area of Sandwath Farm and there is an area of landscape woodland/scrub planting but no information is provided to indicate what the ecological value of these areas will be and how they will be managed in the long term. There is also a floodplain compensation area in this location and its value in providing ecological compensation and enhancement should be explored. Given the close proximity of residential areas there is again an opportunity to consider the provision of accessible green space.

CT-05-504-L1 & CT-06-504-L1 – this area has a parcel of material stockpile and a large area of floodplain compensation – as such it will be subject to high levels of disturbance. Both of these areas are located directly adjacent to Patefield Wood which is a Site of Importance for Nature Conservation (SINC) and ancient woodland. There are also a number of veteran trees recorded in the location. The impacts of these temporary and permanent changes to these areas of land need to be assessed in detail and given that this area of land is not required for the main railway works, should negative impacts be recorded then HS2 should aim to avoid these impacts by locating these works elsewhere. No ecological mitigation or compensation is provided within this location and given the impacts expected this is not considered acceptable.

CT-05-505 & CT-06-505 – this area will leave areas of land isolated between the two railway lines. On the restoration plan there are large areas of woodland planting and whilst this may be appropriate in some locations without having first identified the local impacts it is possible that there may be other more appropriate habitats such as grassland or shallow wetlands. This area historically supported

extensive wetland habitats prior to being drained for agriculture and HS2 should look to identify remnant wetland habitats that can be used as a reference for more appropriate reinstatement.

CT-05-505-R1 & CT-06-505-R1 – this area includes a parcel of land for temporary material stockpile and a large area of floodplain compensation. This is an ideal location to look for opportunities to create shallow wetlands which would have been extensive in this area in the past.

CT-05-506 & CT-06-506 – in this location there is a SINC known as Haigh's Grass (SE53-11) which appears to be almost entirely lost to a temporary material stockpile and construction land – this is considered unacceptable given the temporary nature of the land use and HS2 should make every effort to locate the stockpile elsewhere and ensure necessary measures are put in place to protect the interest features of the SINC. In addition indirect impacts resulting from changes in hydrology from excavation of balancing ponds and flood compensation areas will need to be assessed in relation to Kirby Wharfe SSSI and Haighs Grass SINC as both of these sites are water dependent and sensitive to changes in the local hydrology. The area identified for flood compensation has the potential to provide an area of ecological compensation/enhancement due to its location in close proximity to the SINC and SSSI. Objectives for this area should include expansion of the habitats currently identified as interest features for designation, providing a buffering and connectivity function. Large areas of woodland planting within this location are unlikely to be appropriate to the locally important habitats.

CT-05-507, CT-06-507, CT-05-507-R1 & CT-06-507-R1 – whilst works in this area appear to be closely associated with the existing railway there is the need to take account of a SINC known as Station Yard (SE54-01) which has not been identified within the WDES. The site appears to be lost to construction works and as noted previously, where possible impacts should be avoided. Where avoidance is not possible mitigation and or compensation measures will be required. Currently no mitigation or compensation is proposed for the works at this location.

Landscape

The WDES methodology for undertaking landscape and visual assessment is generally consistent with standard methodology (GLVIA third edition). However, the assessment does not aim to present a complete assessment but only significant effects. This is the applicant's judgement and prevents a complete picture of how 'significant effects' have been determined and what is not included.

The WDES landscape and visual assessment is inconsistent in the way that it is presented and is particularly challenging to review and interpret because the map books needed to refer to are presented at different scales, formats and orientation (CT series, LV-02 series and LV Viewpoints series). This increases the likelihood of errors and inconsistency in the design and reporting of effects and mitigation.

A series of 'significant affected viewpoints' are indicated on the LV series plans but there is no explanation of how these have been determined in the absence of detailed assessment and field work. The geographic or spatial extent of the landscape and visual effects should be explained and shown on the supporting plans within the Final ES, as HS2 methodology.

The proposals for mitigation are unexplained and cannot be measured or linked to the likely significant effects identified within the assessment. There is notable inconsistency of proposals and mitigation shown between the CT and LV series plans.

In terms of area-specific landscape comments, these are set out below:

CT-06-500 to CT-06-501 – this section is designated as Locally Important Landscape Area (LILA) within Selby District Council Local Plan (ENV15), valued as an attractive landscape associated with the limestone ridge, with its distinctive undulating topography and richer tree cover. In this area, the Local Plan requires that particular attention should be paid to the design, layout, landscaping of development and the use of materials in order to minimise its impact and to enhance the traditional character of buildings and landscape in the area, an approach which has been discussed and agreed through the Local Plan Examination. This value and sensitivity is not recognised within the assessment and this is not acceptable. The reason why this section is placed on 11m high embankment at the highest point of the ridgeline is unclear and will inevitably cause significant adverse landscape and visual effects. The use of linear tree planting along the north side of the line is unclear. Proposed mitigation should reflect the local landscape setting. The use of woodland planting is inconsistent between CT and LV plans. The significance and setting of Huddleston Hall is not recognised and mitigation is absent (additional viewpoints and photomontage locations should be provided).

CT-06-502 to CT-06-503 – this section is also designated as Locally Important Landscape Area (LILA) within Selby DC Local Plan (ENV15), comments as above. Linear planting along embankments should be reduced and supported by the wider use of mitigation to support and integrate with local landscape character. It is essential that greater emphasis is given to reduce construction and operational effects at the settlements of Barkston Ash and Sherburn in Elmet due to proximity and high sensitivity.

CT-06-504 +L1 to CT-06-505 +R1 – The height, length and scale of Barkston Ash Embankment and Church Fenton Viaduct is of concern and there are likely to be significant adverse landscape and visual effects on the settlement of Church Fenton given the proximity. Great consideration should be given to the quality of aesthetic design of structures and wider community benefits and offsetting. Landscape mitigation should reflect and integrate with the wider low lying wetland landscape character and setting while reducing settlement impacts. It is unacceptable that there is no proposed mitigation to reduce operational impacts, which have potential to be significant adverse.

CT-06-506 to CT-06-507 – There is potential for significant landscape and visual effects on the settlement of Ulleskelf due to sensitivity and proximity. Landscape mitigation should reflect and integrate with the wider landscape character and setting while reducing settlement impacts. It is unacceptable that there is no proposed mitigation to reduce operational impacts.

CT-06-507-R1 –There is potential for significant landscape and visual effects on the settlement of Bolton Percy due to sensitivity and proximity. Landscape mitigation should reflect and integrate with the wider landscape character and setting while reducing settlement impacts. It is unacceptable that there is no proposed mitigation to reduce operational impacts.

Sound, noise & vibration

Section 5.16 identifies “noise barriers” as a means of avoiding or reducing significant airborne noise effects. It is proposed on viaducts, where further noise mitigation (in addition to the standard parapet wall) that the parapet wall be extended to a total height of 2m, 3m or 4m above rail level in certain locations. The proposed route passes close to residential receptors at Church Fenton on a viaduct (the finished height of the viaduct is yet to be decided but it is likely that the structure will be significant). It is anticipated therefore that a noise barrier as described in section 5.16.4 will be necessary. It should be clearly noted that whilst the barrier may provide effective mitigation against

noise it may be totally unacceptable in terms of alternative impacts such as visual amenity or from a landscape perspective.

Section 8.13 deals with Sound, Noise and Vibration and considers the likely significant effects arising from the construction and operation of the Proposed Scheme on residential and non-residential receptors. The potential impacts from noise and / or vibration on animals, the historic environment and tranquillity are beyond the scope of section 8.13. Section 8.13.4 refers to HS2 Ltd's engagement with Environmental Health Practitioners, this engagement is welcomed but it should be noted that it is ongoing, at the time of writing this consultation response the Council have not had the opportunity to discuss in detail the section of railway in Selby District in terms noise and vibration which is unacceptable.

Selby District Council are aware that baseline surveys referred to in section 8.13 are currently being undertaken, but are not aware whether or not any such surveys have taken place in the District. The assessment method does not specify noise limits in absolute terms and instead proposes to ensure that the current Government noise policy and guidance will be met. This approach is welcomed, particularly since the proposed route as it passes through Selby District is rural in nature and as such is likely to enjoy a relatively tranquil soundscape. However section 8.13.13 appears to contradict this approach as reference is made to "*effect thresholds for the onset of both 'adverse' and 'significant adverse' effects on health and quality of life have been defined for noise and vibration, as described in the EIA SMR*". Clarification is required as to whether the assessment of the magnitude of the impact is to be made in absolute or relative terms.

Section 8.13.14 states that adverse effects on health and quality of life on a larger community group may also be identified as significant on a community basis. This seems to imply that the assessment of the magnitude of significance is influenced by the number of receptors affected. This approach is questioned in so far as a significant adverse impact is equally significant to a receptor regardless of how many receptors are affected. Whilst the need for balance is accepted, this does not diminish the impact on the single receptor.

Section 8.13.30 scopes out facilities that permit short term occupation such as campsites and caravan sites. Selby District Council are not aware of any such facilities close to the proposed route in the Selby District, but, should such a facility exist it is more than likely to be valued for the peace and tranquillity that a rural setting affords. It is questioned whether this type of facility should in fact be considered, as failure to adequately protect such a facility could undermine its viability.

Section 9.13 on Sound, noise and vibration reiterates a commitment to the broad policy objectives contained within the NPSE.

Section 9.13.14 introduces target values defined by the World Health Organisation (WHO), section 18 of the Environmental Impact Assessment Scope and Methodology Report and goes on to specify various levels. Given that the proposed route of the railway passes through a predominantly rural area it is recommended that predicted noise levels are considered against baseline noise data, particularly where baseline noise levels are low. Failure to consider this may lead to a significant impact due to the magnitude of change in noise level regardless of whether the absolute threshold level is exceeded or not.

Section 9.13.12 states HS2 Ltd's commitment to provide noise insulation works as required by the Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 where a significant adverse impact is predicted. Insulation measures such as upgraded or secondary glazing

will not address significant impacts in garden areas, balconies or outdoor spaces. It is therefore recommended that consideration is given to mitigating adverse impacts in these areas.

Section 13.1.3 does not mention engagement with Selby District Council with respect to the sound, noise and vibration. It is assumed this omission is an error. It is crucial that Selby District Council is engaged in all matters affecting the district.

Section 13.5.12 appears to define at what noise level HS2 considers that significant impacts during operation begin. The levels set are 40dB_{LAeq(8hr)} night time and 50dB_{LAeq(8hr)} day time. Selby District Council would broadly agree that these levels are appropriate but would recommend that where baseline noise levels reveal low background noise levels that the magnitude of change is taken into account. It is noted that no account has been taken of the impact from individual short duration noise events and would recommend therefore that noise levels in terms of LA_{max} are seriously considered particularly at night time.

Section 13 deals with Noise and Vibration impacts general provisions, measures to reduce potential noise and vibration impacts and monitoring. This section is written in general terms, and it is expected that site specific management plans are developed and agreed to ensure that the general principles contained within the CoCP are achieved.

Section 13.2.5 states that the nominated undertaker will seek to obtain consents under section 61 of the Control of Pollution Act 1974. This approach to control the impacts on Noise and Vibration appears to be not in the spirit of the CoCP as it is reliant on consent being granted by a number of Local Authorities. Following this approach could lead to Local Authorities having to deal with complaints from local residents which may ultimately lead to enforcement action being required. It is questioned whether this approach is in the spirit of the Hybrid Bill process as HS2 Limited would in effect be seeking Parliamentary Consent in terms of primary legislation that is dependent on consent being obtained from a number of Local Authorities.

Q2: Do you have any suggestions about additional information or assessments that should be included in the Environmental Statement?

General Comments

In terms of the site compounds proposed within the district, further information is required regarding their size, what materials they will be used for and access arrangements during the construction period. This should be set out comprehensively in the Code of Construction Practice, along with guidelines for monitoring. It is critically important that measures are set out to ensure that these sites are satisfactorily reinstated following the construction period.

Archaeology

It is advised that commercial aerial photography from summer 2018 is included in this assessment as the very dry weather provided excellent conditions for the detection of archaeological cropmarks. Many of these commercial flights are only just becoming available e.g. on Google Earth and it is recommended that the aerial photographic analysis is updated to include such sources.

Ecology

It is recommended that full up to date baseline data is provided along with the results of habitat and species surveys undertaken to industry standards – these must cover all areas of the proposed scheme including temporary and permanent areas (including operational areas and construction compounds / storage areas) and any sites of compensation.

A detailed Ecological Impact Assessment (EclA) will need to be undertaken within the Environmental Statement backed by the above habitat and species data – this should be undertaken in accordance with the most recent CIEEM guidelines for EclA ensuring that all direct, indirect , temporary and permanent effects are assessed. Once impacts have been identified then the mitigation hierarchy should be applied – with impacts avoided where ever possible. This is particularly important for ecological features lost as a result of temporary works – an example of this relates to Haigh’s Grassland SINCC which falls within an area identified as a temporary material stockpile and for construction. Such a loss is unnecessary and could be avoided by re-siting of the stockpile. HS2 should make it a priority to avoid impacts wherever possible.

Where mitigation or compensation areas are proposed to offset unavoidable impacts these should include habitats and ecological features relevant to the impacts and the surrounding area. These areas should be of sufficient size to ensure they can be managed sustainably in the long term and there should be a focus on connectivity with existing areas of semi natural habitat. Opportunities should be sought to use flood compensation areas to provide habitat mitigation or compensation – particularly where they are in close proximity to existing ecological features such as SSSIs, SINCCs and ancient woodlands.

Monitoring proposals must be included to demonstrate the success of mitigation and compensation areas. Also where there may be any uncertainty around impacts upon ecological receptors monitoring should be used before, during and after construction works to provide evidence of effects, where negative effects are recorded compensation measures must be implemented.

Landscape

The landscape and visual effects within the WDES have been assessed without field survey being undertaken and the assessment is based on assumptions made about landscape and visual effects both for sensitivity and magnitude. It is therefore recommended that a full field survey is undertaken to inform the assessment and mitigation in the Final ES. The significance of effects reported in the WDES can therefore only be considered uninformed and provisional.

Construction and operational phase Zones of Theoretical Visibility (ZTV) are not provided or explained within the assessment. It is recommended that detailed ZTVs are produced to inform the assessment and mitigation in the Final ES. These should be refined through field survey to take account of notable surface features such as woodland, buildings and hedgerows.

There are some significant viaducts, embankments and cuttings within Phase 2b. It is recommended that the design of these structures is sufficiently detailed to a stage where they can be taken into account within the Final ES, particularly relating to scale, height and appearance.

Whilst mitigation is illustrated in the WDES, it seems to follow a linear and non-descript format rather than achieving the wider design. The landscape design principles and benefits set out in the supporting HS2 document ‘Landscape Design Approach’ should be encouraged and provided within the Final ES.

Q3: Do you have any other comments?

Archaeology

The WDES indicates that the proposed route will cause electromagnetic interference. This will in effect neutralise a corridor on either side of the line from future archaeological research in the form of geomagnetic survey. It is recommended that the zone of interference is subject to geomagnetic survey prior to construction either as part of the assessment process or final mitigation.

In considering mitigation, it is noted that the HS2 Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) states the need to “deliver clear benefits for communities along the route, stakeholders and the wider public. All works therefore have to be grounded in the need to deliver public benefit, in a cost effective manner and within the confines of a construction programme. Delivering maximum knowledge and clear public benefit from a defined budget and within a defined timeframe is a central tenet of the Employer’s approach to the investigation of the historic environment along the route”. With this in mind, the importance of community engagement is stressed as an important element of any planned archaeological mitigation. HS2 will deliver a significant contribution to archaeological knowledge in the Selby District. By working closely with community groups, schools and other community-based organisations HS2 can provide valuable opportunities for the public to engage with and learn about the historic environment in both their local area and the wider District.

Ecology

Habitat creation and establishment must be undertaken by specialists to ensure that the habitats and ecological features proposed within the plans are able to be achieved. Monitoring will be important at these early stages to determine if the target habitat is being achieved and to introduce additional measures where necessary.

In order to provide the necessary mitigation, compensation or enhancement function any sites provided will need to be managed in the long term. Ideally this should be an organisation with the relevant skills and experience in managing nature conservation site. HS2 will need to be mindful of the requirements of these long term managers in designing the compensation sites in terms of habitat composition, size, access and funding. Organisations such as Wildlife Trusts or local conservation organisations will not be in a position to manage lots of small, isolated sites.

In order to assist with the long term sustainability of ecological mitigation and compensation sites it would be useful for HS2 to consider some of the sites in conjunction with community resources and green infrastructure. These resources could include community orchards, allotments and accessible woodlands. Provided that ecological management plans are secured for these sites they can provide both community and biodiversity benefits.

Landscape

There are likely to be significant adverse landscape and visual effects during the construction phases, although this should be minimised wherever possible. Mitigation is recommended given the duration of the construction period and the high landscape and visual sensitivity.

It is recommended that landscape proposals and mitigation should follow a clear strategy in response to local landscape character and setting. A wider green infrastructure approach would be

welcome; to conserve and enhance local landscape character; to provide opportunities for enhancing health and wellbeing in publically accessible areas; and to positively integrate earthworks and structures.

The success of the landscape design can only be achieved through long term maintenance and management. HS2 should consider the organisational agencies needed to manage offsite landscape mitigation and how public access might be secured and managed.

Advanced landscape mitigation, planting and community offsetting projects are recommended because they are likely to provide significant benefit in reducing adverse effects, both during the construction and operational phases.