

**High Speed Rail: Consultation on the route from the
West Midlands to Manchester, Leeds and beyond**

Sustainability Statement

Appendix E7 – Community Integrity

A report by Temple-ERM for HS2 Ltd



July 2013

CONTENTS

1.	INTRODUCTION.....	1
2.	DEMOLITIONS METHODOLOGY.....	1
3.	ISOLATION METHODOLOGY	2
4.	SEVERANCE METHODOLOGY	3

1. INTRODUCTION

- 1.1.1. This report has been prepared to support the HS2 Phase Two proposed scheme for Consultation Sustainability Statement (the Sustainability Statement, Volume 1), a report which describes the extent to which the Government's proposed scheme for HS2 supports objectives for sustainable development. This document is a technical appendix which summarises the method for the Community Integrity appraisal, informing the Sustainability Statement main report.

2. DEMOLITIONS METHODOLOGY

- 2.1.1. Demolition estimates have been calculated based on the approach outlined below. This approach is a refinement of the methodology used in the optioneering stage, incorporating a further level of manual intervention as opposed to using a purely automated process.
- 2.1.2. All demolition numbers generated are based on the Ordnance Survey (OS) Address Layer 2 Postal Address Point Layer, dated March 2013. Each of the address points within the data set was classified into one of the following four categories:
- Residential;
 - Commercial and Retail;
 - Manufacturing and Industry; or
 - Community.
- 2.1.3. This follows the same classification as adopted for the HS2 Phase One AoS.
- 2.1.4. The address points were then reviewed within GIS alongside the proposed scheme earthwork boundaries and OS Master Map base mapping, also dated March 2013. The review team composed relevant engineering, environment and property representatives to ensure a consistent and informed approach was adopted across both the western and eastern legs.
- 2.1.5. All address points that fell within the earthworks boundary were automatically assigned a demolition classification. Address points that fall outside of the earthworks boundary but whose building outline was intersected by the earthworks boundary, were also classed as demolitions. The final stage of the review addressed known likely engineering constraints that would impact immediately beyond the earthwork boundaries at particular locations. In locations where there is an adjoining set of buildings (with separate address points) which individually may partly fall outside of the earthworks boundary (e.g. terraced housing, adjoining commercial units), all address points for that set of buildings or adjoining structures have been included for demolition, where it can be reasonably assumed that for construction purposes the entire structure would need to be demolished.
- 2.1.6. At station and depot locations the same method was applied but using the proposed scheme construction boundaries.
- 2.1.7. The following known limitations and assumptions apply in regards to the demolition reporting. These will be addressed, as far as possible, within the Environmental Impact Assessment stage of the process.
- Demolition counts are based primarily on the Ordnance Survey Address Layer 2 Postal Address point data which is the most readily accurate, accessible and up-to-date

national single GIS data set available. Any buildings that did not have an associated address point within this dataset were not included with the property counts;

- Address point data and land use may be categorised incorrectly within the data set;
- Demolitions resulting from ancillary works and realignment of existing infrastructure are not included due to the level of design at this stage in the process;
- Demolitions associated with construction boundaries have only been considered in station and depot locations;
- Demolitions arising from land becoming untenable due to land take are not included;
- OS Master Map base mapping is updated on a tile by tile basis; there may be instances when properties have been built or removed but the associated OS mapping is yet to be updated; and
- Demolition counts have been undertaken for the Sustainability Statement using updated Ordnance Survey Address Layer 2 Postal Address point data and updated OS Master Map base mapping since the same process was carried out for the January 2013 Sustainability Summary. Changes to demolition numbers have occurred as a result of these updates.

3. ISOLATION METHODOLOGY

- 3.1.1. Isolation estimates have been calculated based on the approach outlined below. This approach is a refinement of the methodology used in the optioneering stage, incorporating a further level of manual intervention as opposed to using a purely automated process.
- 3.1.2. The isolation methodology only considers parts of the proposed route that are not in tunnel (including green/ cut & cover tunnel). Isolation would not occur along tunnelled sections.
- 3.1.3. The method is to search for residential or community properties that may be isolated from the wider community as a result of the proposed route. These properties are usually situated in areas that would be enclosed on all (or nearly all) sides by major linear features¹ or other major physical boundaries e.g. airfields/forests. Major linear features include;
 - the proposed scheme;
 - existing railway lines;
 - motorways or dual carriageways; and
 - Major rivers, canals or waterbodies.
- 3.1.4. Generally, areas of isolation are only considered up to a distance of 500m from the proposed route.
- 3.1.5. To record the area of isolation, a polygon around the boundary of the isolated areas is digitised (using the linear boundaries as identified, together with the outer edge of the earthworks).

¹ Minor roads, single lane A-roads, ditches, brooks and streams, and administrative boundaries are *not* considered major linear features.

- 3.1.6. The counts of residential and community properties within the identified areas were derived from the latest available address point data. This is done by clipping the address point data to the polygons generated above to provide a count for each area.
- 3.1.7. Properties that have already been identified as demolitions are then removed from these counts where applicable.

4. SEVERANCE METHODOLOGY

- 4.1.1. Severance estimates have been calculated based on the approach outlined below. Only parts of the proposed route that are not in tunnel are considered when calculating severance (including green/ cut & cover tunnel) or on viaduct.
- 4.1.2. The methodology involves looking for communities that will be severed such that one part of a town or settlement would be cut off from another. The severed area is that which contains properties cut off from the main community or from essential services (either from an associated main settlement, or the smaller part of a bisected settlement). At this level of the analysis detailed appraisal of community facilities or local traffic routes is not undertaken, although some key features may be evident from the base mapping.
- 4.1.3. To record the area of severance, a polygon around the boundary of the severed areas is digitised (using the linear boundaries as identified, together with the outer edge of the earthworks).
- 4.1.4. The counts of residential and community properties within the identified areas were derived from the latest available address point data. This is done by clipping the address point data to the polygons generated above to provide a count for each area. Properties that have already been identified as demolitions are then removed from these counts where applicable.
- 4.1.5. Areas that were identified but were found to contain no properties were be labelled as “no properties” to provide record that they have been identified, even if there are no impacts to report.