



Working Draft Environmental Statement [WDES]
consultation for HS2 Phase 2b

Full response

Section LA11- Staveley to Aston
Consultation published October 2018
Close - 21st December 2018

Lessons from history

The winters of 1767 and 1768 were some of the wettest on record. Despite turnpike roads, trade was disrupted for months, and even London flooded.

Seth Ellis Stevenson, Rector and Headmaster of Retford Grammar School, saw first hand the detrimental impact on trade in the North of Derbyshire, South Yorkshire and North Nottinghamshire. He resolved to build an alliance of tradespeople and merchants to explore the creation of a canal from Chesterfield to the River Trent. He had seen the work of James Brindley and the Worsley Canal built by him for the Duke of Bridgewater and invited Brindley to talk to interested parties about the development of a waterway to meet their need for reliable, high capacity transportation of goods - lead from the Derbyshire hills; timber; coal; pottery.

Firstly, Brindley and his assistant John Varley surveyed a route from Chesterfield to the Trent using the River Idle from Bawtry - but the Idle was known to be silting up and Bawtry, once a thriving medieval inland port, was in decline. The potential promoters of the scheme rejected the route and asked for an alternative. The second plan involved taking the canal past Retford towards Gainsborough. This route required an additional tunnel to get through Castle Hill, and once again was rejected. Eventually, a route was determined that took the eastern section of the canal through Retford to the Trent at West Stockwith.

In order to build the canal, an Act of Parliament was required - one which received Royal Assent on 28th March 1771 and is still in force. This clearly set out pre-agreed parameters for the building of the canal; gave powers to set up the Chesterfield Canal Company and to raise the £100,000 to cover the costs of building the waterway.

Despite (still) bitter memories of the South Sea Bubble 50 years earlier, and deep suspicions both of the banking world and of Government, the money was found very quickly through public subscription, and work began in the summer of 1771.

The whole canal was completed in 6 years, 2 months and 6 days, opening on 4th June 1777.

The design of the canal was revolutionary for it used a summit pound as a four mile long water reservoir to feed the canal; it has flights of multiple locks of a type never seen before on the English canals, and is arguably Brindley's finest achievement. The canal scaled the scarp slope of the Rother Valley and negotiated the long slope down to the River Trent. The Norwood Tunnel, opened in 1775 was, the longest tunnel in the world by a factor of four at 2880 yards long. The tunnel was completed in three years and equal in length to the original Harecastle Tunnel (1777).

During its life, the canal has been threatened twice by railway schemes - the North Midland development in 1838 and by the Great Central in 1892. On each occasion, requirement for mitigation works was written into the Railway Act to require works by the rail company to ensure that the canal remained open and navigable.

There are now more people and boats on our waterway system than ever before. We firmly expect that HS2 Ltd should be instructed to find solutions to enable the Chesterfield Canal restoration to continue.



The Canal Today

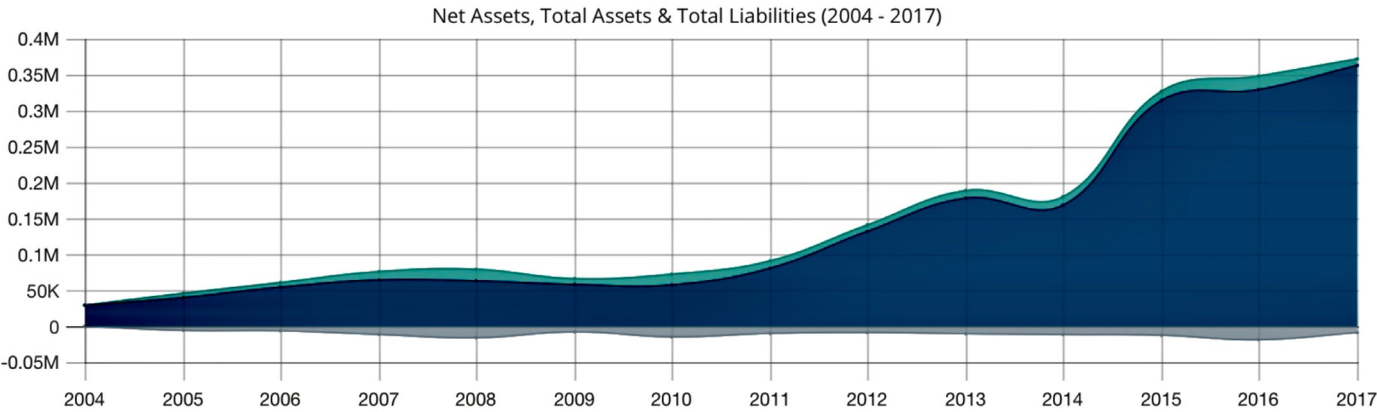
1.1 The Chesterfield Canal Trust [hereafter referred to as ‘the Trust’] exists to promote the Chesterfield Canal as a waterway for all users - whether on foot, cycle or boat, and to campaign for the canal’s restoration. The Trust is a registered charity and Company Limited by Guarantee, having 1,800 members [October 2018]. It was originally founded as the Chesterfield Canal Society in 1976. CCT is a partner organisation in the Chesterfield Canal Partnership and together with local authorities, the Canal and River Trust, Inland Waterways Association, wildlife and environmental bodies is committed to fully restoring the Chesterfield Canal. So far 37 of the 46 miles of the canal have been brought back into use and there remain just 9 miles left to restore. Full restoration will make it possible to travel from Chesterfield in North Derbyshire to West Stockwith in North Nottinghamshire on the River Trent once more. Working with partners, the Trust has:

- Restored 34 locks
- Built three new locks, two of which were built by volunteers
- Built two new marinas
- Built or rebuilt 11 major bridges.

Over the last 15 years, the Trust has grown both in income raised from fundraising and in membership with members now contributing over 40,000 hours of volunteer time to the objectives of the Trust.

Since work began in the late 1980s, approximately £10 million has been contributed from public and voluntary funds, and in kind to the restoration.

Table 1. Chesterfield Canal Trust. Resource growth - 2004-2017



Further details of the Trust’s activities can be found on the Trust website at www.chesterfield-canal-trust.org.uk.

1.2 The vision of the Trust is to achieve the restoration of the remaining 9 miles of the canal by 2027 - the 250th anniversary of the canal’s completion. Opportunity also exists to develop a navigable 7 mile channel utilising the River Rother between the Chesterfield Canal at Killamarsh and the South Yorkshire Navigation at Rotherham. This would create a walking, cycling and boating route of approx. 110 miles around the Sheffield City Region.

The Trust is firmly committed to playing its part in the promotion of personal health and well-being; community engagement with the waterway; local and regional economic regeneration through the ‘blue economy’ and the stimulation of tourism and growth in the region and across the UK and, together with others, sees the canal as a vital resource to achieve all of these commitments.

1.3 The Chesterfield Canal and HS2

In January 2013 the initial preferred route for HS2 Phase 2b was announced. The proposed route obliterated more than 1200 m of the Canal restoration route and effectively blighted the Canal restoration for funding from major grant giving bodies. The reason for this blighting was the degree of uncertainty surrounding the future viability of the canal; i.e. if HS2 was going to be built on the line shown, would the canal still be available for the public to enjoy in 25 years time?

Despite the change of route for Phase 2b in 2017, the canal restoration is still blighted. There are now two intersections between the route and the line of the canal restoration - at Lowgates in Staveley and at Norwood. However, since January 2013, the canal restoration has been starved of major funding, primarily because the Trust has been unable to gain assurances from HS2 Ltd. that solutions will be found to enable restoration to continue at Lowgates, where the line of restoration is crossed by the spur serving the planned Infrastructure Maintenance Depot, and further north where the main line of the railway crosses the canal restoration line at Norwood, making a surface route for restoration impossible.

The Trust has sought to engage with HS2 Ltd. about the challenges that the railway design poses for the canal restoration and has met with a variety of responses - some more helpful than others. Interactions with HS2 have been characterised by three phenomena:

- The Trust repeatedly correcting errors in maps and data; receiving assurances that corrections would be made to plans at the next iteration, and finding no such changes were subsequently made.
- Large scale churn of staff and the loss of ‘organisational memory’ on the part of HS2.
- Inconsistency of treatment. Perhaps the most stark example of this has been in the instance of the Trust asking for advance mitigation to enable the canal restoration to continue. This requires:
- An assurance from Government that means of building the railway would be found that did not frustrate or stop the restoration.
- A full dialogue about how the railway and canal could co-exist and be co-created.
- Guidance to potential funders that would give assurance that public funds could be safely invested in the restoration.

In each instance, the Trust has been told since March 2013 that such assurances could not be considered until the Bill for Phase 2 [now 2b] had been to Parliament. However, within 6 months of the 2017 Phase 2b route modifications being confirmed, the residents of the Shimmer estate were given assurances that part of the Estate would be purchased by HS2 Ltd - despite Mexborough being situated on Phase 2b of HS2 and thus requiring legislation in a similar manner to the canal restoration before commitments were made.

1.4 Co-creation rather than competition

The Trust firmly believes that the development of the HS railway and the restoration of the canal can go forward in parallel and sees positive ways to enhance the public reputation and the objectives of each project. For this to happen, there needs to be an alignment of objectives at policy, strategic and engineering levels between the two projects.

The Trust has signed an NDA with HS2 Ltd. but there are still massive gaps in knowledge as to how the railway will be built; how it will impact on the canal restoration, and how the impacts of the railway design can be mitigated to enable the canal restoration to continue.

Response 1
Support from the Secretary of State

The Trust believes that the restoration has been blighted for 6 years by HS2 plans, and that it is now time for Government rather than HS2 to supply written assurances and solutions to enable restoration work to continue.

The situation remains that the Trust is still to see the assurances given verbally, most recently by the Secretary of State [HoC Transport Questions 11/10/18 - SoS to Lee Rowley MP] reflected in any design documentation emanating from HS2 Ltd.

“The Secretary of State for Transport (Chris Grayling)

It might be helpful if I inform the House that High Speed 2 is today publishing its environmental statement for phase 2b, which is the northern leg from Crewe to Manchester and through the east midlands to Leeds. It will be available in the Library. The route will clearly have an impact on many people, and I have instructed HS2 to treat people with as much decency as possible at what is a difficult time for them. If there are examples of where that is not happening, I want to hear about it, as does the Under-Secretary of State for Transport, my hon. Friend the Member for Wealden (Ms Ghani). I would encourage Members to come and see us about that.

Lee Rowley (North East Derbyshire) (Con)

T5. Chesterfield canal is part of the way through a restoration of its historical route, which is to be completed in time for its 250th anniversary a few years from now. However, the restoration of the last few miles has been stopped in recent years because confirmation cannot be obtained from HS2 that barges will still be able to get underneath it if the trains go ahead. Can my right hon. Friend assure me that that will be possible? [906942]

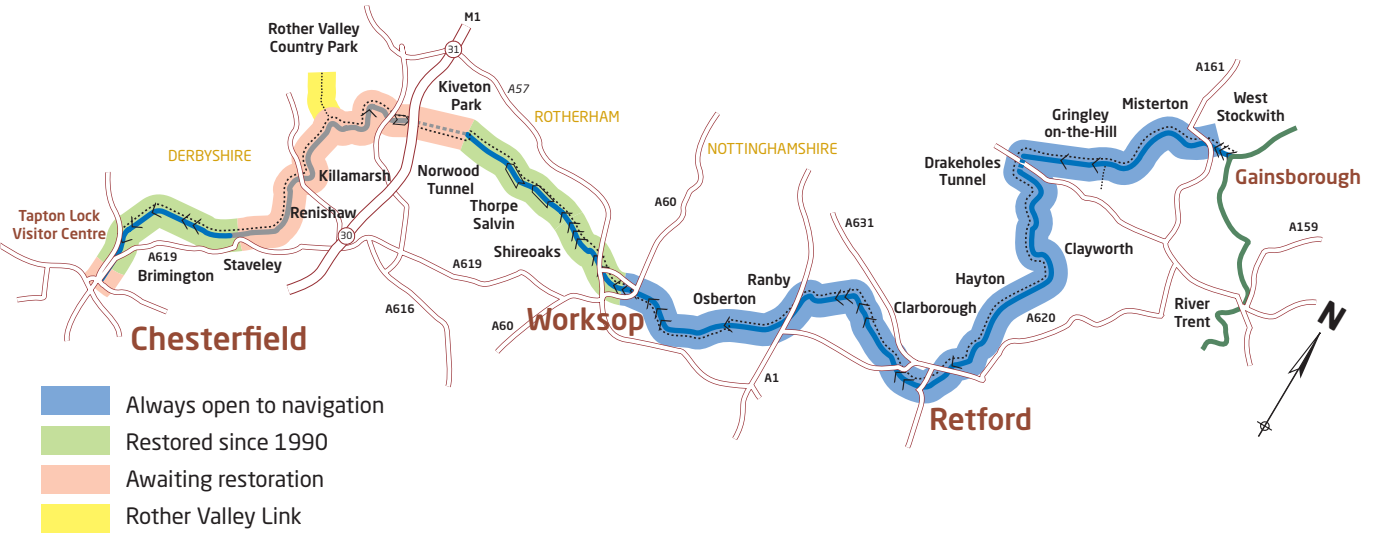
Chris Grayling

I should like to give my Hon. Friend that assurance. It is a tragedy, in an era when canals are being reopened for leisure purposes, that when the M6 was built, so many parts of the Kendal canal were cut off and are no longer available. I do not wish, and I do not expect, to see HS2 do the same and culvert canals when the railway is being built.”

Response 2
Active engagement from Government and the DfT

The Trust has come to the view that there are some issues that HS2 Ltd itself can not decide on with third parties, and that there is a need for the Department of Transport and Government to become involved in aligning and reconciling the existing policies and strategies determined for local regeneration with those for the development of HS2. This is necessary to ensure that HS2 does not needlessly damage local regeneration.

The Chesterfield Canal under restoration



The Working Draft Environmental Statement - Overarching comments

2.1 The complexity of documentation and duration of the consultation period

The consultation on the draft ES is not a statutory process in so far as it is not directly linked to the presentation of a Bill to Parliament [see Vol 1 - 7.1.17].

There are two very different sets of guidance about consultation by Government Departments and NDPBs with members of the public and voluntary agencies - the House of Commons Standing Orders, notably Standing Order 224a, governing statutory consultation related to Private Bills and the Code of Practice on Consultation issued by BERR July 2008 which relates to consultations mounted by both Central and Local Government based on the Concordat drawn up in 2000.

HoC Standing Orders require 10 weeks for formal consultations, whereas the Code of Practice suggests a minimum of 12 weeks should be allowed, and where the material being consulted upon is extensive or complex that, where feasible, the 12 week period should be extended.

- The WDES documentation relating to the Staveley to Aston section of the HS2 line alone amounts to c.1100 pages and contains a mix of technical and non-technical material.
- The WDES sets out the consultation period as running from 10th October to 21st December 2018 - a total of 73 days or just over 10 weeks or 7½ working weeks.
- As the date for the presentation of the Phase 2b Bill to Parliament has been put back by 12 months to 2020, ample time could have been made available for an extension to the consultation period to reflect the complexity of the documentation at the heart of the process.

In guidance issued to Government Departments and to their agents, emphasis is placed on the need for those consulting to respond to consultations within 12 weeks of the consultation, or provide an explanation of why this is not possible. HS2 Ltd. has repeatedly failed to meet this expectation as is evidenced in WDES Vol 1 - Pg 16 - Table 1 [continued].

See November 2016 para. 2 which indicates that the response to the consultation on the initial route which closed in Jan 2014 was not reported until July 2016.

Response 3 Consultation and the consultation documentation

- The WDES Non-technical Summary airbrushes out the canal and consequences of the railway plans for its restoration. Despite frequent references to the canal in the main body of the WDES [approx 140 in all] this is not reflected in the Summary which is likely to be the document most read by policy makers and decision takers.
- The Trust firmly believes that the significance of effects of the railway plans on the restoration of the Chesterfield Canal have been under estimated and are under-reported in the WDES.
- At Vol1 - 8.8.12 it is asserted that “Appropriate mitigation measures have been identified and taken into account” - this is clearly not the case in respect of the canal restoration at the present time.
- The Trust believes that the information contained within the WDES is inconsistent in its nomenclature; the data used and in its categorisation and analysis. The quality of the data analysis needs to improve greatly before being presented to decision takers.

2.2 Incomplete information

Whilst it is fully accepted that the design of the railway is very much a work in progress, in this consultation, no data whatsoever is offered in respect of the Midland Mainline spur through Chesterfield and on to Sheffield.

- The proposed stopping point - Chesterfield railway station - is less than 200 metres from the head of the Chesterfield Waterside development - a £310 million scheme to be built around the canal basin. We are thus unable to comment on the impacts of the station development on Waterside - a crucial element of the canal's restoration. Similarly, modifications planned to the bridges at Tapton have direct relevance to the operation of the navigable and restored section of the canal.
- It is highly regrettable that no draft ES will be produced for the MML section to be used with HS2 before the Bill is lodged with Parliament in 2020 particularly as the Proposed Scheme will include details of [inter alia] track and widening requirements and realignments of PRow, roads, tracks and access ways - all of which have the potential to impact on the canal and its restoration.

Despite the claim in 3.3.2 that “The potential impacts on the Chesterfield Canal restoration have informed the proposals” this assertion is not supported throughout Vol. 2 LA11.

Response 4 Further restoration prevented

The Trust believes that the WDES clearly identifies multiple instances where the construction and operation of the railway will have major adverse effects with significant sensitivity, and as such these instances should be identified and mitigated for preferably before the draft Bill is presented to Parliament.

As the current situation as portrayed in the WDES stands, the railway effectively prevents all further restoration taking place.

The WDES is inaccurate, ambiguous and needs urgent and detailed correction before the design of the railway progresses to draft Bill stage.

As further examples, the Trust would cite:

At 2.5.3, “Impact of proposed scheme on local residents and environmental receptors”, neither the Chesterfield Canal nor Norwood and Locks Local Wildlife site [LWS] are considered.

At 6.2.3. & 6.2.4, the Cuckoo Way is recognised as a ‘promoted’ destination but despite being intrinsically linked to the historic route of the canal it is proposed to divert its line by 200 metres to the north at Norwood.

At 7.3.17 & 7.3.18, there is no mention of the Canal as either a watercourse or a water body.

At 7.4.4, Norwood and the Canal Locks, whilst being recognised as one of the most tranquil and beautiful spots along the line of the railway in LA11, are to suffer the loss of 18 ha of ancient woodland - equivalent to 31% of the total woodland; this despite the fact that the woodland supports nationally scarce species.

At 7.4.30, it is recognised that the LA11 area will lose a total of 26 water bodies many of which will provide habitats for bats, otters, water vole, white clawed crayfish, aquatic and terrestrial invertebrates - many impacted to county or metropolitan level, but there is no connection between this habitat loss and the restoration of the canal as a landscape feature that would offset the loss of ponds.

In Chapter 8 health impacts are discussed and a number of major negative health impacts are clearly obvious:

- Loss of significant areas of green space are likely to have health impacts - 25% to the IMD; 31.5% at Norwood.
- Where land is only being taken during the construction phase of the railway development, the minimum period of public exclusion is 27 months.
- Despite the Chesterfield Canal being the last and most complex canal designed by James Brindley [1722-1772], its heritage at Staveley and Norwood has not been protected. HS2 Ltd.'s decision not to show undesignated heritage assets on maps undermines this unique and nationally important heritage asset. This is extremely unfortunate in so far as 9.3.7 states that 62 non-designated heritage assets will be required either temporarily or permanently for the construction and operation of the railway. Moreover, rather than independently and critically assessing the evidence of heritage significance with respect to the canal, it is asserted [9.2.8] that “any effects [of the railway development on the Chesterfield Canal] are unlikely to be significant”.
- There appears to be an inconsistency between the approach adopted towards heritage assets' i.e. not to show non-designated assets and the approach adopted with regard to ecology and biodiversity where [7.3.3] statutory and non-statutory are shown on map series CT-10.

At 9.3.5, it describes the Chesterfield Canal as being of ‘moderate value’

At 9.4.6., there are no permanent effects of building the railway shown for the Chesterfield Canal, and 9.4.17 suggests that no specific mitigation measures have been identified [as being required]. However, the WDES [7.4.12] identifies that 26 ponds and aquatic habitats will be lost, and yet there is no attempt to identify aquatic mitigation measures within the WDES.

On Land Quality, 10.3.36 identifies that the Chesterfield Canal and Staveley Town Basin have low risk of contamination and low sensitivity whereas Table 27 [p. 187] rates the Staveley Works site as posing “moderate” risk to surface water - predominantly the River Rother and the Chesterfield Canal.

10.4.16, identifies the potential of the construction work on the IMD as holding potential to impact on the quality of the water in the canal.

Aspects of the planned management of visual impact could prove highly detrimental to the canalscape:

At 11.4.4, the use of well-maintained hoardings and fencings would not be compatible with the canal and would impact detrimentally between Hollingwood and Staveley Town Basin and between Staveley Town Basin and Lowgates.

Landscape impact assessments [Table 31] suggest that Staveley and Brimington, and the “Staveley Post Industrial River Valley Local Community Area” would suffer moderate adverse effects and be a source of significant sensitivity, whilst at Norwood [in the “Woodall Coalfield Local Community Area”] there would be major adverse impacts with significant sensitivity.

Visual assessments contained in Table 33 [para 11.4.9] indicate that views to both the east and west for users of the Cuckoo Way [VP401-03-002 & 004] would suffer major adverse impact and be a significantly sensitive issue. At Staveley, users of the Cuckoo Way would experience similar. Most significantly, the landscape assessments at both construction and operational phases suggest that the situation will not improve between Year 1 and Year 15 and that mitigation planting “will not contribute to any screening or visual integration”.

Visual impact at both Norwood and at Barrow Hill is described as “major adverse” and the sensitivity as “significant”.

Socio-economic assessments

Tourism - Assessments ignore the fact that 3½ million tourists a year currently come to Chesterfield - famous for its crooked spired parish church. Whilst tourism is a major driver in NE Derbyshire as in every other part of the county, there is no mention of the impacts of the railway development on tourism over the next 15 years.

Job loss - It is estimated that there is a potential job loss of 80 jobs due to the inability of businesses to relocate within the LA11 area.

Sound, noise and vibration

Response 5
Health assessments

Some communities impacted by HS2 Phase 2b are among the most deprived in the UK

Given the former uses of the Staveley IMD site and other areas of land to be used on the route of Phase 2b, it is vital that current health status of residents is better understood, and their health monitored through the process of construction and into operation.

Whilst the ability to assess significant health effects is extremely important, especially given the proposed reuse of formerly contaminated brownfield land, an assessment of the impacts on residents’ and visitors’ wellbeing should also be a feature of the ES.

Response 6
Noise assessments

Any plans for residential moorings at Tapton and STB need to be reviewed in light of the projected noise levels for the IMD and Staveley Spur.

Currently, there are no noise assessments for any part of the staveley spur from the hs2 main line and none will be prepared until the formal ES is prepared - despite the fact that the residents of Barrow Hill and Staveley will experience the 24/7 working of the IMD

No assessments are available for Waterside or Tapton where train noise from the use of the MML could impact on the feasibility of residential mooring.

Response 7
Noise baffles

The Trust firmly believes that unmitigated noise from the railway will be severely detrimental to the development of the Canal corridor as a tourism feature and needs to be baffled and reduced before the operation of passenger trains begins.

Airborne noise during construction will impact on the Barrow Hill, Staveley and Staveley Town Basin localities together and the users of the Cuckoo Way will also experience considerable airborne noise, as will passengers on the Trust’s tripboats operating on the western section of the canal.

Response 8
MML consultation

The Trust believes that it is vital for members of the public and impacted stakeholders to be able to examine the proposals for the HS2 route from Birmingham to Leeds and the proposals for the MML concurrently, and well before the draft Bill and formal ES are lodged with Parliament., and requests that Government ensure that this is done.

Response 9
Noise and Vibration

The Trust believes that it is extremely important that noise and vibration assessments are carried out and published well in advance of the draft Bill going to Parliament so that proper mitigation needs and measures can be identified ahead of petitioning.

The Trust also notes that initial assessment of operating noise for the section of track past Norwood is assessed as having the potential to exceed the upper EU thresholds for day time noise.

13.5.25 states:

The initial assessment indicates that the forecast noise from long-term railway operation may exceed the daytime threshold set by the Noise Insulation Regulations, the night-time Interim Target identified in the WHO Night Noise Guidelines for Europe 2009 or the maximum noise levels criteria set out in the SMR, at individual residential properties closest to the Proposed Scheme in:

- Bank House Farm in the vicinity of the B6419 Bolsover Road (identified on Map SV-01-380b).
- Barlborough in the vicinity of the A619 Chesterfield Road (identified on Map SV-01-381).
- Barlborough in the vicinity of Westfield Lane (identified on Map SV-01-381).
- Barlborough in the vicinity of the A6135 Sheffield Road (identified on Map SV- 01-381).
- Wales in the vicinity of Cherry Tree Road and B6059 School Road (identified on Map SV-01-384).

Traffic and transport

At 14.3.16, the WDES recognises that “There is one navigable waterway in the Staveley to Aston area. The Chesterfield Canal is located on the north-west side of Staveley, with another open section east and west of the route of the Proposed Scheme at Nor Wood. Remaining sections of the canal route are being restored, such as at Staveley.”

At 14.4.26 the WDES states “It is not currently expected that the construction of the Proposed Scheme would have a significant effect upon navigable waterways or canals in the Staveley to Aston area.”

14.5.16 makes a similar claim for the operation of the railway.

Response 10
Canal as an integral feature

The Trust submits that HS2 and the ES need to be consistent in the treatment of the canal as an integral feature of the la11 area.

2.1.11 Chesterfield Canal is listed as part of the key transport infrastructure and as such should be accommodated in the scheme design.

2.1.28 Chesterfield Canal restoration is safeguarded in the North East Derbyshire Local Plan and Chesterfield Borough Council Local Plan and should therefore be accommodated in the design.

2.1.29 Canal restoration at Staveley was underway prior to the HS2 route announcement and would reasonably be expected to have been completed already were it not for the uncertainty caused by HS2 itself. It should therefore be included as a project likely to be constructed.

2.1.30 Severance of the Chesterfield Canal at Staveley by construction of the HS2 IMD line will have significant, permanent negative cumulative impacts and should therefore be included in the formal ES.

2.2.8 The construction of the railway and its programme generates construction noise and potential disruption for 4½ years in Staveley and just over 4 years at Wales South/Norwood.

Water resources

Table 36 [p273] identifies the value of surface water receptors and rates the canal as a high value receptor.

5.3 Environmental baseline, Existing baseline - flood risk and land drainage. Volume 2: Community Area LA 11 Staveley to Aston Mapbook CT-05-639-R1 Grid H8.

Para 15.3.21, discusses water dependent habitats [p278] and makes the assumption that Norwood and the Locks Local Wildlife Site is potentially a water dependent habitat and is assumed to be of ecological importance.

The land potentially required during construction includes the Broad Bridge Dyke. This watercourse is the feed for the operational Chesterfield Canal and reservoir spill from Harthill Reservoir. In a really big rainfall event the area may be flooded.

Flooding from artificial waterbodies is discussed in 15.3.29 which posits that there is potential for flooding from the canal reservoirs at Pebley and Harthill primarily following the failure of any retaining feature. This is extremely unlikely, for both of these reservoirs feed the canal’s eastern division which flows towards the River Trent and are to the east of the watershed between the Trent and the Rother/Don catchment areas.

15.4 Effects arising during construction Volume 2: Community Area LA 11 Staveley to Aston Mapbook CT-05-639-R1 Grid H8. The land potentially required during construction includes the Broad Bridge Dyke. This watercourse is the feed for the operational Chesterfield Canal and reservoir spill from Harthill Reservoir. A suitably sized pipe/culvert/ bridge (similar to others on the feeder) will be needed to maintain the canal feed during construction. Any restoration scheme for this land needs to ensure that provision is made for the continued operation of this canal feeder channel and reservoir spill.

15.5 Effects arising from operation The Pebley and Harthill Reservoirs which feed the eastern, operational section, of the Chesterfield Canal lie to the east of the HS2 route. The impact on drainage flows to these reservoirs and the feeder channel from Harthill reservoir, which has its own catchment in the Norwood tunnel area, needs to be investigated. If the drainage flows are found to be affected Canal and River Trust will require that these are protected.

2.3 Methodologies

2.3.1 Definition of ‘Significant Health Effects’

The WDES Summary posits that there are no accepted criteria for defining ‘significant health effects’ but cites no authority for this assertion. HS2 Ltd. may find that the Department of Health, the Office for National Statistics, Public Health England, the Institute of Environmental Health and the World Health Organisation are able to fill the knowledge deficit. In 2013, the Health and Community Safety Department of Derbyshire County Council carried out a Rapid Health Impact Assessment of the impacts of the HS2 Initial route on communities in Chesterfield and NE Derbyshire. Many of the findings are still very relevant to the route agreed in 2017 particularly in respect of Staveley and NE Derbyshire.

There is a wide-ranging biomedical literature which links cause and effect to physical and mental ill health and it is especially important that steps are taken to enable HS2 and its contractors to fully understand factors which may negatively impact of residents’ health; see Figs. 1-4 appended.

The Canal and River Trust has undertaken significant preparatory work for a ‘wellbeing’ assessment framework linked to canal towpath access and usage; see Fig. 5 appended.

2.3.2 Community Area - boundary selection

Response 11

Significant Health Effects

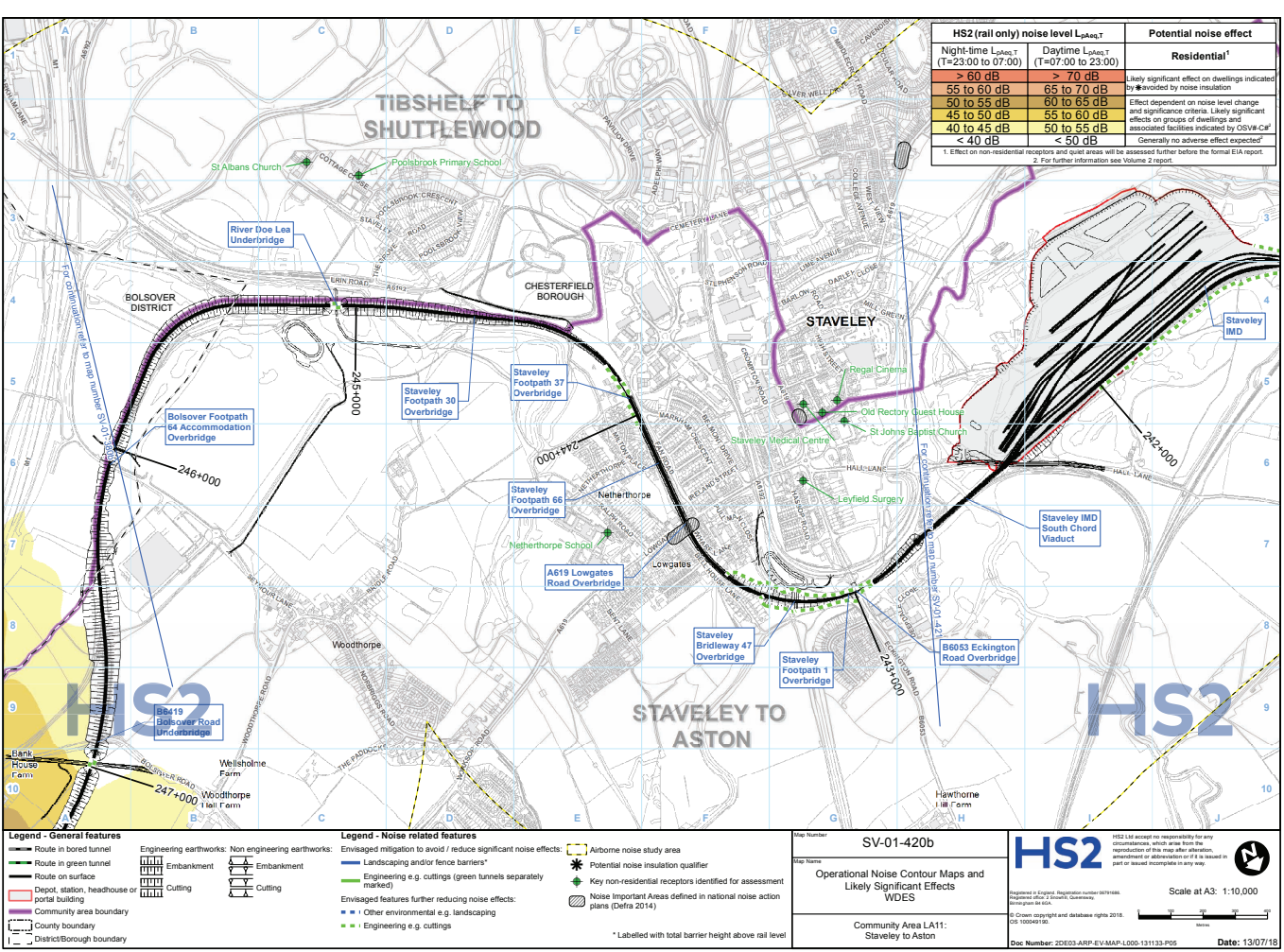
For the 50,000 walkers and 25,000 cyclist who use the Chesterfield Canal towpath [Cuckoo Way] annually in NE Derbyshire, the denial of access to that facility is likely to have significant negative health and well-being consequences. Furthermore, many of the walkers and cyclists using this facility are not elite high performing athletes, but rather members of the public engaged in self managing their own health improvement by increasing exercise.

Canal towpaths are level and offer a unique resource for easily accessible, low impact exercise in the open air.

The choice of boundaries between ‘Community Areas’ used in the WDES artificially divides natural geographical communities and has the potential to lead to the under reporting of impacts by ‘splitting’ the results between adjacent areas.

It is clear from maps provided with the WDES that the boundary between the Tibshelf/Shuttlewood and Staveley/ Aston Community Areas runs right through the heart of the Hollingwood/Barrow Hill geographic communities, thus the impacts on this community cannot be fully assessed and is not represented properly in Vol.2 LA11.

In undertaking any meaningful social science research, it is regarded as good practice to establish boundaries in areas of very low population thus enabling data to be presented that reports on natural geographic communities rather than artificially created enclaves such as the Community Areas created for the WDES.



As can be seen from the this example, the Community Area boundary (purple line) between the Tibshelf/ Shuttlewood and Staveley/Aston areas cuts right through populated areas of Staveley - thus skewing and diminishing the reporting of impacts on natural communities in this locality.

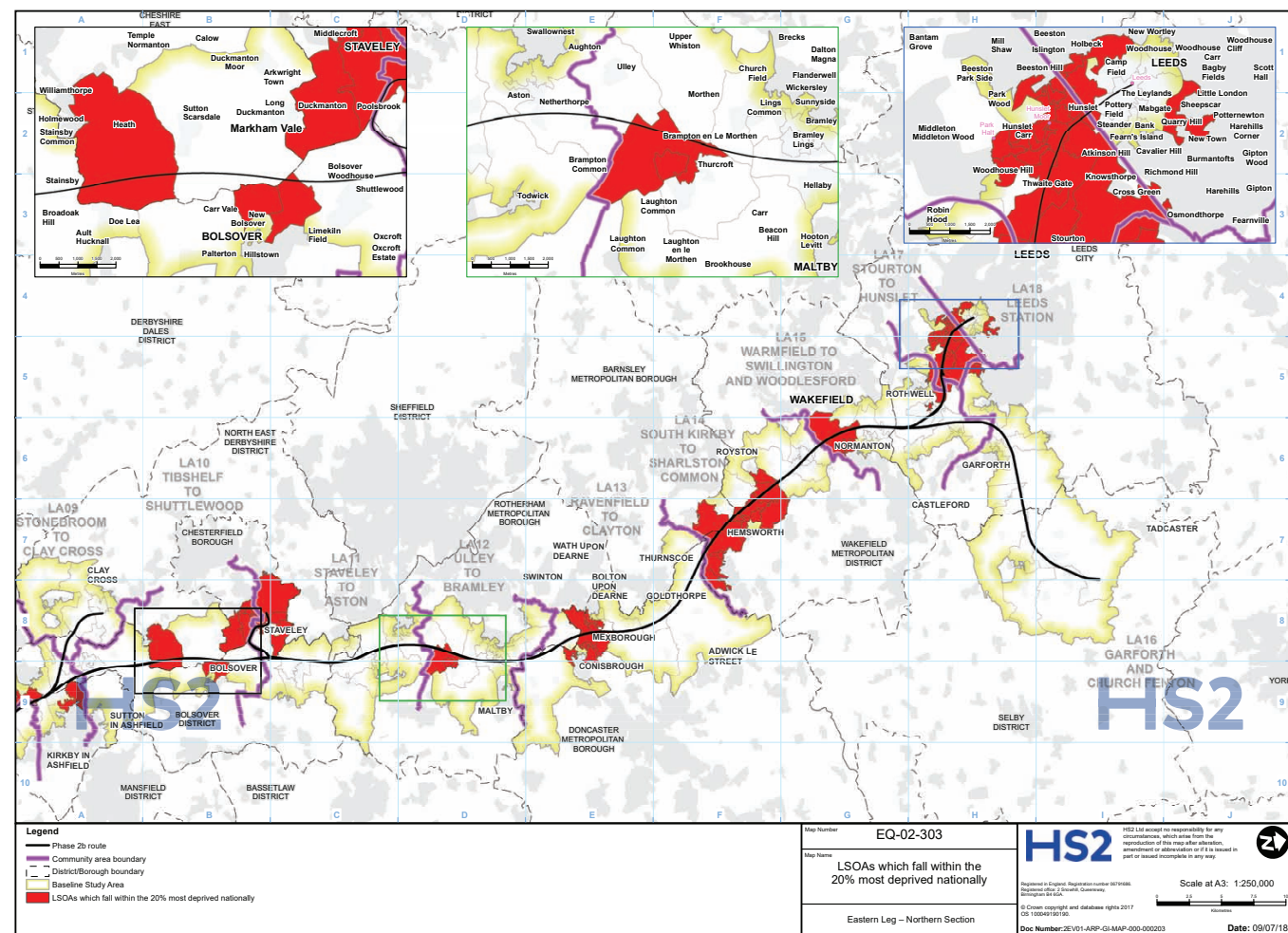
This skewing effect is particularly problematic in areas already acknowledged to be experiencing multiple stresses. Data from the Equalities Impact Assessment [published October 2018] demonstrates that a number of communities impacted by HS2 are among the 20% most deprived nationally and experience high levels of physical ill health and disability.

Response 12

Need for further socio-economic assessment work

The Trust believes that greater consideration needs to be given to mitigating the impacts of building and operating HS2 Phase 2b on communities experiencing high multiple deprivation and poor health. At Vol. 1-8 - 13.14, it is stated that “significant adverse effects on health and the quality of life on a larger community group may also be identified as an effect likely to be considered significant on a community basis”.

It is therefore important that ‘communities’ relate to real life entities and not those constructed for the purpose of building the railway.



This skewing effect is particularly problematic in areas already acknowledged to be experiencing multiple stresses. Data from the Equalities Impact Assessment [published October 2018] demonstrates that a number of communities impacted by HS2 are among the 20% most deprived nationally and experience high levels of physical ill health and disability.

2.3.3 Bill submission documents

At the time of the Phase2b Bill to Parliament plans and sections will show the vertical and horizontal alignments of the Scheme together with the limits of deviation - unlike the plans published with the WDES.

The limits of deviation are fundamental data to the assessment of the WDES - without a knowledge and understanding of where those limits are set, it is impossible to assess the impact of the Scheme on specific locations or on other schemes impacted by HS2 proposals.

In the case of the Chesterfield Canal at Lowgates, any downward modification of the route albeit within the Limits of Deviation could have disastrous consequences for the canal restoration.

Response 13 Limits of deviation needed

In the WDES there are NO clear dimensions and limits of deviation given.

The Trust requests that the Limits of Deviation for Phase 2b are made public well in advance of the date when the Bill is lodged with Parliament.

2.3.4 Use of Design Manual for Roads and Bridges standards for historic environmental assessment

In Vol. 1 - 5.5.1, reference is made to the intended use for HS2 construction of DMRB standards for alterations to major roads. DMRB is a wide-ranging document and widely used for the development of major projects throughout the country. DMRB Volume 11 - Section 3 - Chapter 11 - Part 6 deals with canal restoration projects.

Of particular relevance to the current context is the guidance given at 11.5:

“Where a scheme impacts on un-navigable, disused or abandoned waterways there are three levels of response:

- (i) to construct, as part of the scheme, a navigable crossing or a diversion to navigable standards;
- (ii) to construct the scheme so as not to prevent the restoration and improvement of the waterway at a later date;
- (iii) to make no provision for navigation on the waterway.

Advice should be sought from the Overseeing Organisation, who will indicate the appropriate criteria to be taken into account at each stage of the investigation. Some general guidance on determining the level of response is given below, though each case will be considered by Overseeing Organisations on its merits.”

Discussion on the value of DMRB is again raised in the WDES at Vol. 1 - 8.8.10 which discusses an approach to historic environmental assessment of the proposed scheme.

The fundamental difference between the approach advocated in the DMRB and that being taken by HS2 Ltd. as set out in the WDES is that the DMRB recognises that canal restoration projects are essentially ‘slow burn’ in so far as they take time to gear up; to raise funds and to deliver. Unlike national infrastructure projects, funds have to be raised; volunteers sought and trained, and planning permission sought before works can start.

Response 14 Use of DMRB appraisal standards

The Trust believes that the use of the DMRB approach should be applied to canal restoration projects impacted by the railway proposals, and in particular to the restoration of the Chesterfield Canal.

Response 15 Detrimental effect of HS2 planning process on the restoration of the Chesterfield Canal

The Trust submits that it has been placed at a severe disadvantage by the protracted railway development programme and would, in all other circumstances, have obtained full planning permission for the full nine mile restoration. It therefore asks that the restoration be regarded as committed development for the purposes of the railway design.

The restoration of the canal has featured in successive local authority plans and those authorities signify their support for restoration through their membership of the Chesterfield Canal Partnership.

The announcement of the Initial Preferred HS2 route in 2013 has:

- Blighted the Trust for restoration funds because the continued existence of the canal in the face of HS2 could not be guaranteed.
- Caused the Canal Partnership to lose its Development Manager who foresaw a long period of indecision during which further restoration and development work could not continue.
- Made submission of a planning application for the remaining nine miles of restoration otiose until there was clarity about the HS2 route and assurance of mitigation.

Response 16 Mitigation

The planning of HS2 has already blighted the restoration of the Chesterfield Canal for almost SIX years. Steps were taken to offer mitigation to the Shimmer Estate, Mexborough after only SIX MONTHS. We request ADVANCED mitigation to enable restoration to continue.

Furthermore we request that the canal is regarded as a resource for developing aquatic mitigation for the loss of the 26 ponds along the section of LA 11.

2.3.5 The concept of ‘Committed Development’

Vol. 2 Chapter 2 - 2.1.28 sets out the notion of ‘committed development’ which underpins what is considered [or not] in the railway design process. Essentially:

- Committed developments are defined as developments with planning permission and sites allocated for development, or safeguarded for minerals in adopted development plans, on or close to the land required for the Proposed Scheme.

- Where it is likely that committed developments will have been completed by 2023, these will be identified as ‘future baseline’ schemes and taken into account in the formal ES.
- Where there are committed developments that are considered likely to be constructed between 2023 and 2033, i.e. at the same time as the Proposed Scheme, they would be considered as receptors for the operation of HS2, but also potentially to give rise to cumulative impacts with the Proposed Scheme during construction. Any cumulative impacts and likely significant effects will be reported in the formal ES.
- Planning applications yet to be determined at the time of the formal ES and sites that are proposed allocations in development plans that have yet to be adopted, on or close to the Proposed Scheme, are termed ‘proposed developments’. These will not be included in the assessment in the formal ES.

2.3.6 Mitigating significant and lasting adverse effects

Vol. 2 - 1.2.5 states that the WDES assumes that the policies adopted for Phase 1 and Phase 2a will also apply to Phase 2b. The ES assessment also assumes that any general mitigation measures required as a result of those poli-cies are implemented appropriately in the delivery and operation of the Scheme. There is no definition or guidance as to what may be deemed appropriate [or inappropriate].

In the interests of fairness and justice, it is extremely important that the final part of the HS2 project receives exactly the same [or better] mitigation consideration than the two earlier Phases and does not have to make do with what is left after earlier Phases have placed pressures on the cost envelope.

The SMR : Consultation Summary Report - 6.3.28 makes the following point on mitigation:

“Mitigation measures vary on a case by case basis and are influenced by finding a reasonable balance between environmental and engineering constraints, cost and construction programme impacts, hence ‘where appropriate and practical’ Mitigation measures are not solely decided on cost. The extent and scale of mitigation will be designed to control and reduce significant adverse environmental effects. Priority has to be given to avoiding or preventing effects; and then [if this is not possible], to reducing or abating them; and then, if necessary, to offsetting them through restoration or compensation.”

Throughout the WDES, there is reference to mitigation planting to help replace the [predominantly] trees lost through railway construction. On this section of the eastern leg, there is no consideration given to aquatic mitigation. The restored canal is well placed to help mitigate for the 26 ponds lost through the building of HS2.

3 Site specific response - Hollingwood, Barrow Hill and the IMD

3.1.1 Potential impact on the Staveley Regeneration Corridor and the Chesterfield Canal

In Vol. 1- 5.1.3, the point is made that good design requires a collaborative approach. The proposals as set out in the WDES for the IMD cut across and act against well-developed plans for the Barrow Hill/Hollingwood area; put regeneration plans for the area into suspension; hinder the further restoration of the Chesterfield Canal; cut off; reroute or close up establish rights of way; destroys views and disrupt landscapes. On many elements of the proposals, there has been relatively little collaboration and far more ‘top-down’ imposition.

In Vol. 1 - 4.4.20, the Staveley IMD is confirmed as the nerve centre for the principle engineering maintenance activities on the eastern leg of the railway. The IMD will occupy 37 ha of land; is in a valley overlooked by much of Staveley, Barrow Hill and Hollingwood as well as the main A619 road between Ringwood and Staveley.

It is therefore of paramount importance that the design of the IMD reflects Government policy on sustainable development, which seeks to:

- Avoid significant adverse impacts on health and quality of life.
- Mitigate and minimise adverse impacts on health and quality of life.
- Where possible, contribute to the improvement of health and quality of life.

Whilst the WDES represents the preliminary environmental information and the key features of a point in time design for the Proposed Scheme [Vol. 2 - 1.2.1], it is very evident from this preliminary evidence that the railway will have significant and lasting adverse effects on the settlements and residents of the Staveley Regeneration Corridor, and by inference for the users of the Chesterfield Canal that runs through that corridor.

Response 17 Adverse effects need to be addressed

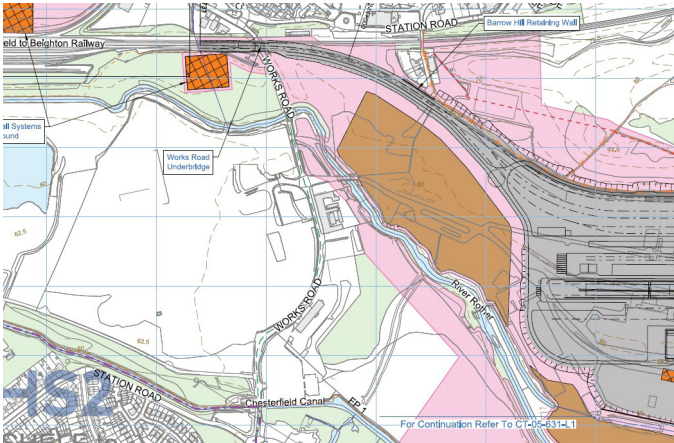
The Trust believes that, given the significant and lasting potential and demonstrable adverse effects identified in the WDES, further studies and research is undertaken and published in advance of the formal ES, to enable members of the public and local organisations to assess the likely impacts of the IMD and railway on the communities in NE Derbyshire and S Yorkshire.

3.2.1 Impact of IMD construction plans on Staveley Corridor regeneration and canal restoration

Land Take



Local development plans



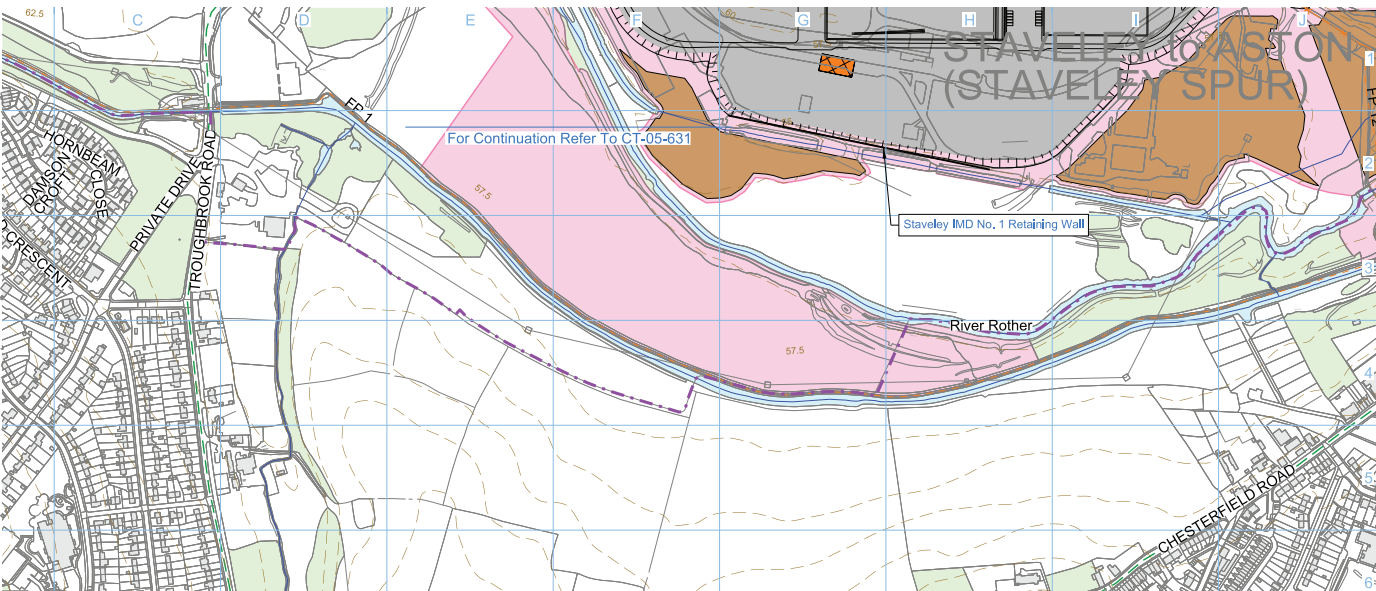
HS2 IMD plans

The plans for the IMD appear to take little account of the Local Development plan for 1500 houses in the Staveley Works Corridor and a new community between Hollingwood and Barrow Hill put forward by developers St Gobain and Chatsworth Settlement Trustees. The much needed Chesterfield and Staveley Regeneration Route shown above on the left map has been expunged from the IMD construction phase map shown on the right [above].

The land take for the construction of the IMD effectively puts this major private sector development for the Staveley Regeneration Corridor on hold for the foreseeable future.

Response 18 Chesterfield and Staveley Regeneration Route

The Chesterfield and Staveley Regeneration Route from Hall Lane to the centre of Chesterfield has been mooted for more than 50 years. Its passage through the Staveley Works Corridor has been airbrushed out of the WDES and the map book, presenting a less than accurate or honest picture of projected land use.



Response 19 Blight in the former Staveley Works area

The Trust believes that the evidence presented in the WDES is grossly out of date, partial and has the potential to significantly damage economic regeneration initiatives in the former Staveley Works area by blighting developments already well advanced in the planning process.

The extensive land take between the River Rother and the restored Chesterfield Canal between Hollingwood and Mill Green threatens this very popular section of the canal and the peace and tranquility of the route for walkers and cyclists; potentially depriving users for up to four years. Noise, airborne pollution, dust and possibly contamination from the contaminated and potentially disturbed Staveley Works site poses a threat to the River Rother and the canal, and to the wildlife that inhabits these watercourses.

Response 20
Threat to canalscape

HS2 jeopardises already restored sections of Chesterfield Canal.

The Trust is concerned that an already restored section of the canal between just NE of Hollingwood Hub through to Mill Green may be rendered unusable in the following respects:

- Fenced along its length on the NE side.
- The subject of dust, noise and fumes from both excavated contamination and from construction plant.
- Visual intrusion into the canalscape with Staveley IMD protruding 7m into the air.
- Degrading of the outdoor experience for walkers and cyclists because of construction activities.

The Trust currently runs public trip boats along this section of the canal, and construction work on the scale envisaged is likely to lead to a downturn in passenger numbers.

Community impacts

It is clear from the WDES that Staveley will host major activities in respect of the development and operation of the railway.

- Staveley Railhead will be the centre for delivery of large materials and movement of excavated materials, receiving imported ballast and managing rail installation materials throughout the eastern leg of the railway.
- Deliveries to the railhead will arrive on a 24/7 basis, with unloading during the day.
- The IMD will operate 24/7 once the railway is operational.

There are no noise assessments in the WDES for the Staveley Spur

Construction waste

2.3.153 Refers to excavated material [excluding topsoil and subsoil] being used as engineering fill and/or environmental mitigation with or without treatment. Given that the IMD site is believed to be heavily polluted and given that it is not clear whether the IMD will require excavation or capping, clarification on the means for dealing with contaminated land AND the proposed method of construction are needed as a matter of urgency.

In order to progress further, there needs to be an agreement about the level at which the new supply line to the IMD will cross the canal; whether there is sufficient headroom to get boats, pedestrians and cyclists under the railway. There needs to be agreement about how equestrians and the Trans Pennine Trail can be accommodated, and where PRow will be rerouted.

4 Mineral line connection between the IMD and the main HS2 line - implications for the Chesterfield Canal Restoration.

4.1 IMD to Lowgates

The plans for the restoration of the Chesterfield Canal are contained in two large volumes known as Next Navigation East and West. These have been freely available to consult on the Trust and Partnership website for many years. The restoration route from Mill Green through Staveley Town Basin and Lock, through Lowgates, over Staveley Puddlebank and on to Renishaw is agreed, and for that reason:

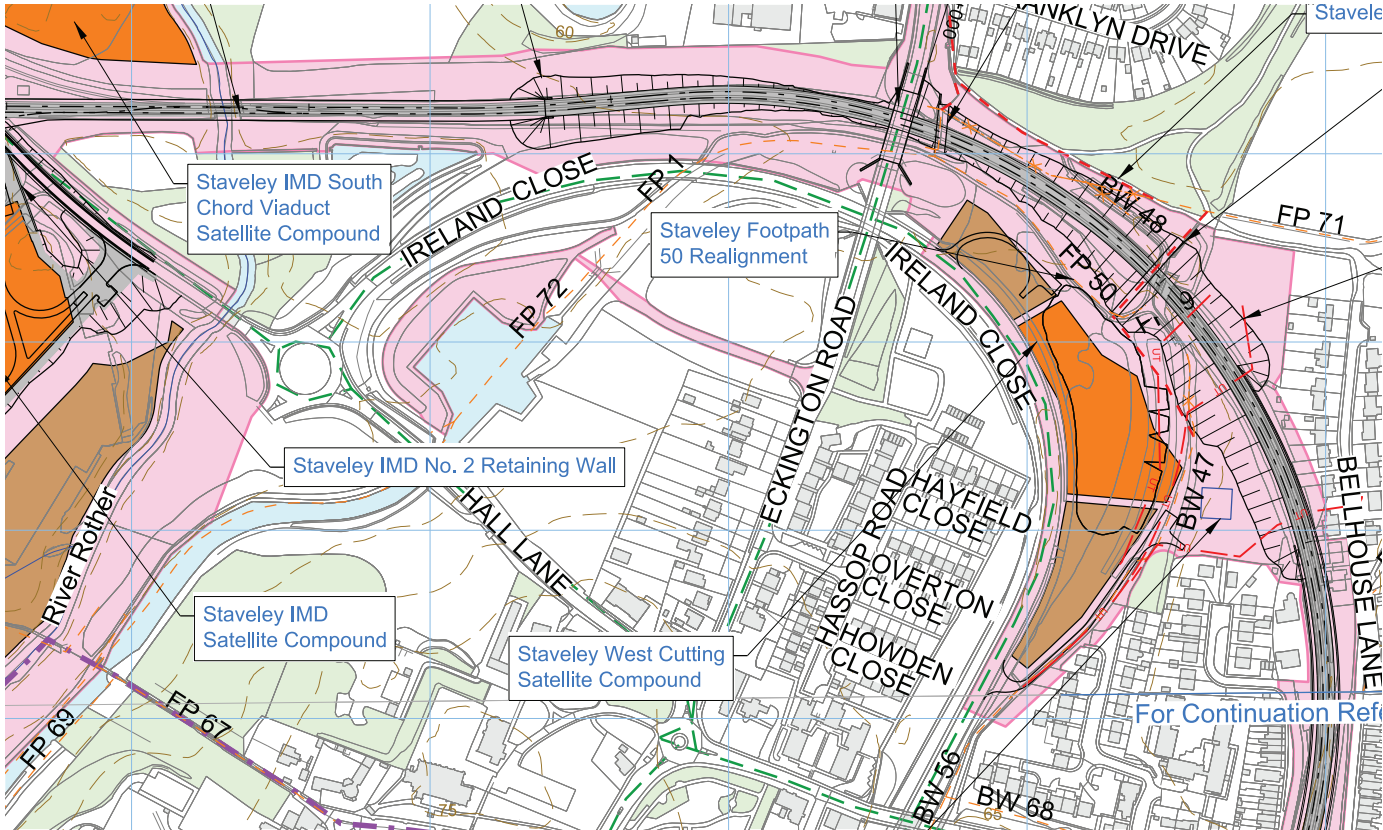
- Chesterfield Canal Trust Work Party volunteers built the 600m of washwall between Mill Green and the entrance to Staveley Town Basin between 2009 and 2012.
- Derbyshire County Council and Markham Vale constructed Staveley Town Basin at a cost of £870,000 between 2010 and 2012 bringing boats back under Hall Lane for the first time in 70 years.
- Following the announcement of the Initial Preferred Route for HS2 in 2013, the Trust’s Work Party began construction of the Staveley Town Lock in June 2013, completing it by May 2016 at a cost of £375,000.
- Following the completion of the lock, and still with no clear decision on the route of HS2, in June 2016, the Work Party began work on Hartington Harbour and have progressed that work round as far as the Mineral Line embankment.

Response 21
Basic engineering information needed urgently

In order to progress the canal’s restoration further, there needs to be an agreement about the level at which the new supply line to the IMD will cross the canal; whether there is sufficient headroom to get boats, pedestrians and cyclists under the railway. There needs to be agreement about how equestrians and the Trans Pennine Trail can be accommodated and where PRow will be rerouted.

4.2 Construction phase

Staveley Town Basin and Lowgates



There is no clarity whatsoever within the WDES as to the level at which the IMD will be built.

The construction of the railway in the Staveley Town Basin/Lowgates area will create wide scale disruption.

The construction windows are as follows:

- Staveley IMD Q4,2024-Q, 2029
- Staveley IMD Chord and Viaduct Q4 2024-Q42027
- Lowgates overbridge Q3, 2025 - Q2, 2026

Half of Staveley Town Basin, Hartington Harbour and part of the land through to Lowgates will be requisitioned for construction activities [CT-06-632], and a balancing pond is proposed adjacent to the restoration line of the canal. This feature has never figured in any of the discussions with HS2 Ltd. and came as a complete surprise. Similarly, the last paragraph on p222 puts forward “a proposed public realm area would run along the Chesterfield Canal at Staveley near the confluence of the Chesterfield Canal with the Trans Pennine Way and the Cuckoo Way. This seeks to mitigate the landscape and visual impact of the Staveley IMD and Staveley spur on residential receptors in Staveley and users of the PRow through providing new areas of public realm along the Chesterfield Canal. These include stepped terraced seating and planting to the east, facing the Chesterfield Canal, as well as providing a flexible public square around Staveley Canal Basin, which could support local activities and events.”

PRow, notably the TransPennine Trail and Cuckoo Way will be re-routed and may be closed for part of the construction period. Replacement over bridges would take 9 months to complete.

Until a clear agreement is spelt out that HS2 will accommodate the canal restoration at Lowgates by ensuring the supply route from the IMD allows sufficient room for the passage of boats below, restorers have no idea of the level or alignment to set for the restoration on the north eastern side of the mineral line.

There is the potential for construction work on the IMD to negatively impact on the water quality of the canal [10.4.6].

Landscape impact assessments [Table 31] identify that Staveley and Brimington, together with the Staveley River Corridor will be subjected to moderate adverse effects of significant sensitivity, whilst visual assessment [Table 33] indicate that there will be major adverse impacts of significant sensitivity and that “mitigation planting would not contribute to any screening or visual integration at this stage.”

11.4.14, comments: “The temporary residual significant effects during construction remain as described above. These effects would be temporary and reversible in nature lasting only for the duration of the construction works. These residual effects would generally arise from the widespread presence of construction activity and construction plant within the landscape and viewed by surrounding residents, and users of PRow and main and minor roads within the study area.” However, the cumulative impacts of construction are likely to be immense in this area and continued consultation and refinement needs to take place between this consultation and the depositing of the Bill.

Response 22
Mitigating the landscape and visual impact of the IMD and Staveley Spur on ‘residential receptors’ and users of the PRow

Rather than plucking mitigation from thin air, the Trust firmly believes that Government, the Department for Transport and HS2 Ltd. should ensure that the formal ES reflects and reports fully on the severe and long-term detriment caused by the development of the railway on the lives of residents and the canal restoration project.

Staveley Town Basin has long been planned as a mixed residential, recreation and business development, and the arbitrary decision by HS2 Ltd. to take the land is not acceptable; a block to economic regeneration and an irrational and ill-conceived act.

The Trust believes that the scale and extent of the damage inflicted since 2013 deserve in-depth study and serious consideration for substantial mitigation, far in excess of meagre tiered seating and the return of extant public realm land to its original developers.

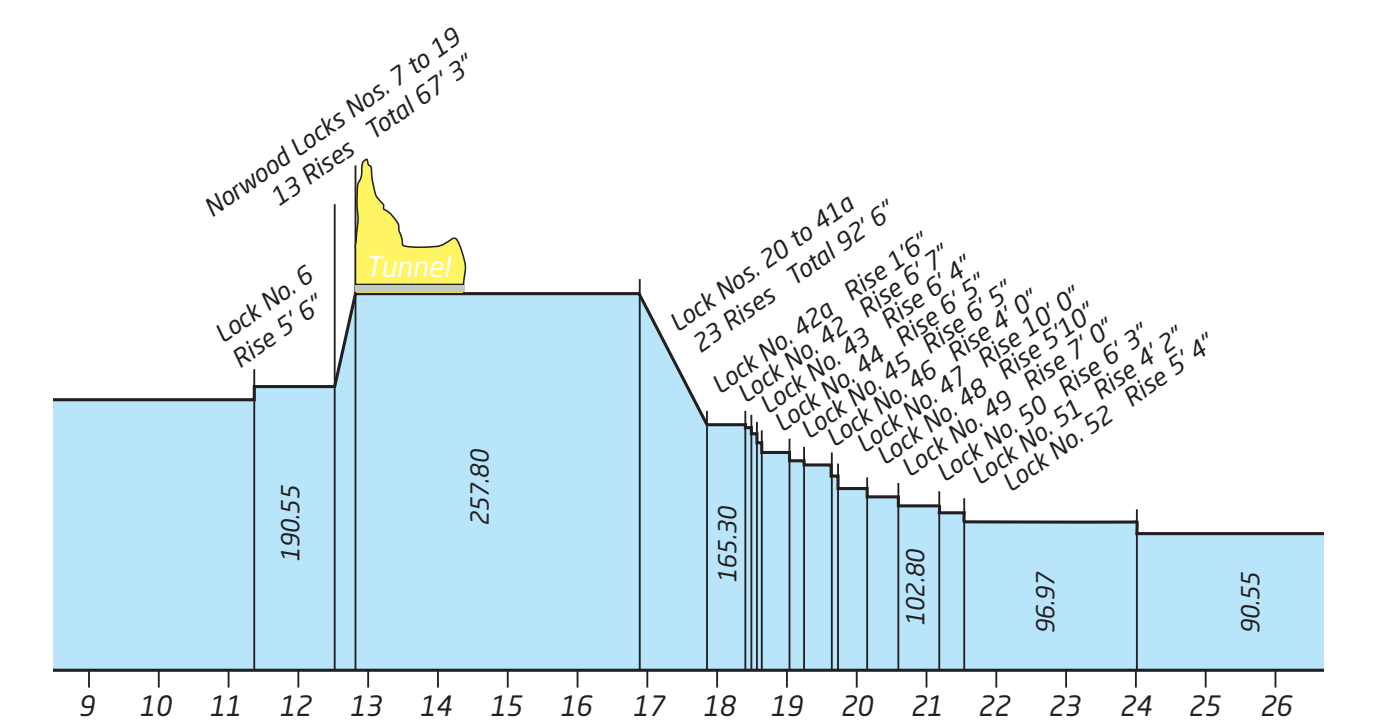
Norwood

5.1 HS2 at Norwood

Without doubt, the design of the railway from Woodall to Wales through Norwood is highly destructive and will decimate landscape characterised by the Norwood ancient woodland, and the Locks LWS of which 31% [18ha] will be lost through the building of the railway.

Numerous PRow will be out of bounds for in excess of two years, and many will be permanently rerouted to meet the needs of the railway.

The visual detriment for users of the Cuckoo Way is immense. For walkers coming from the east there will no longer be views over the Rother Valley to the Pennines, and the WDES describes the impact as “Major adverse. Mitigation planting would not contribute to any screening or visual integration at this stage”



Response 23
Norwood

The Norwood section of LA 11 is one of the most historic and ecologically sensitive on Phase 2b and requires far greater understanding of the impacts of creating the railway through this area.

The historic elements of national importance need examination before any design is finalised. Aquatic mitigation measures for the destruction of the two dozen ponds and value added for the massive decimation of the landscape and tranquil rural area needs to be substantial; capable of adding value, and enabling and supportive of further canal restoration.

4.3.6 characterises the topography of the section of the railway line between Staveley and Aston as “dominated by a series of ridges, rock outcrops and valleys”.

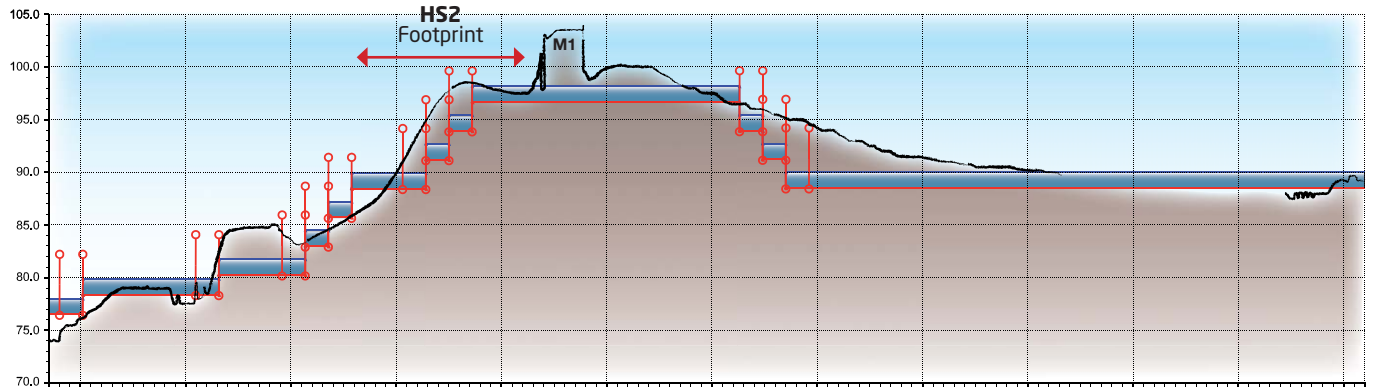
It was this topography that caused James Brindley to rethink his penchant for ‘contour canals’, for in the case of the Chesterfield, he needed to raise the canal level by 23.7 metres from Killamarsh to the summit pound at Kiveton.

In order to accomplish this, he constructed a flight of multiple locks of a type never seen before and constructed the Norwood Tunnel to avoid raising the canal over the brow of the watershed which would have required a rise of an additional 29 metres.

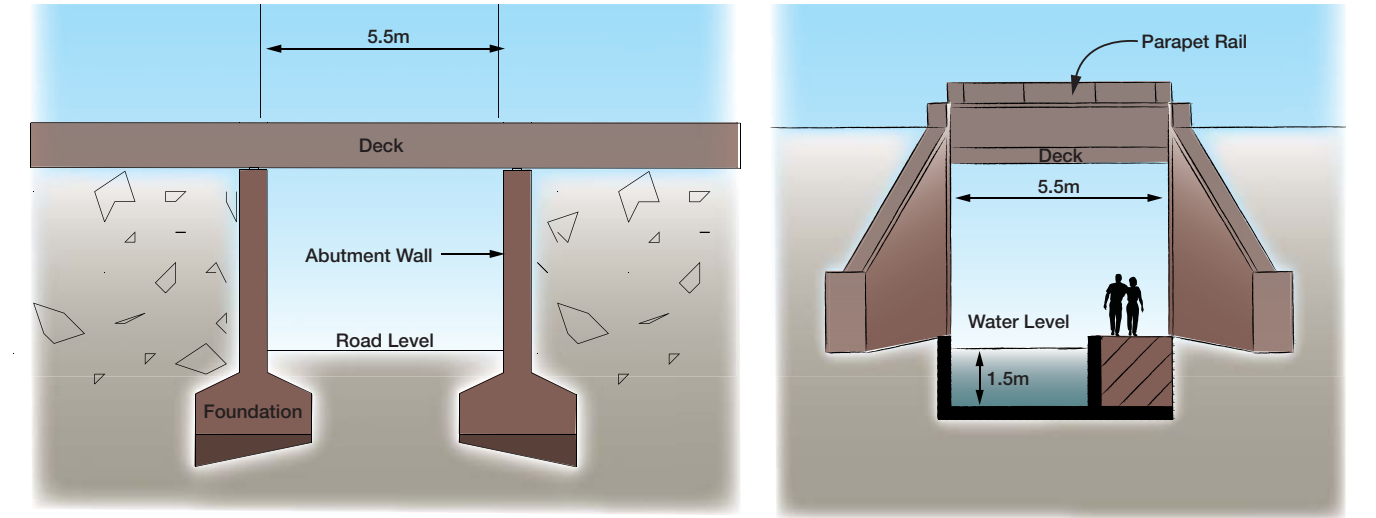
In the context of the restoration, the Trust has been faced with exactly the same dilemma as confronted Brindley - should we plan to use a tunnel or take the canal up and over the summit by the M1?

In 2007, Arup was commissioned by the Chesterfield Canal Partnership to conduct a study of alternatives for getting the canal from Kiveton to Killamarsh. Their report concluded that a surface route utilising the Poplar Farm underpass would be the most cost-effective means of accomplishing the restoration objective.

This solution required a total of nine new locks :



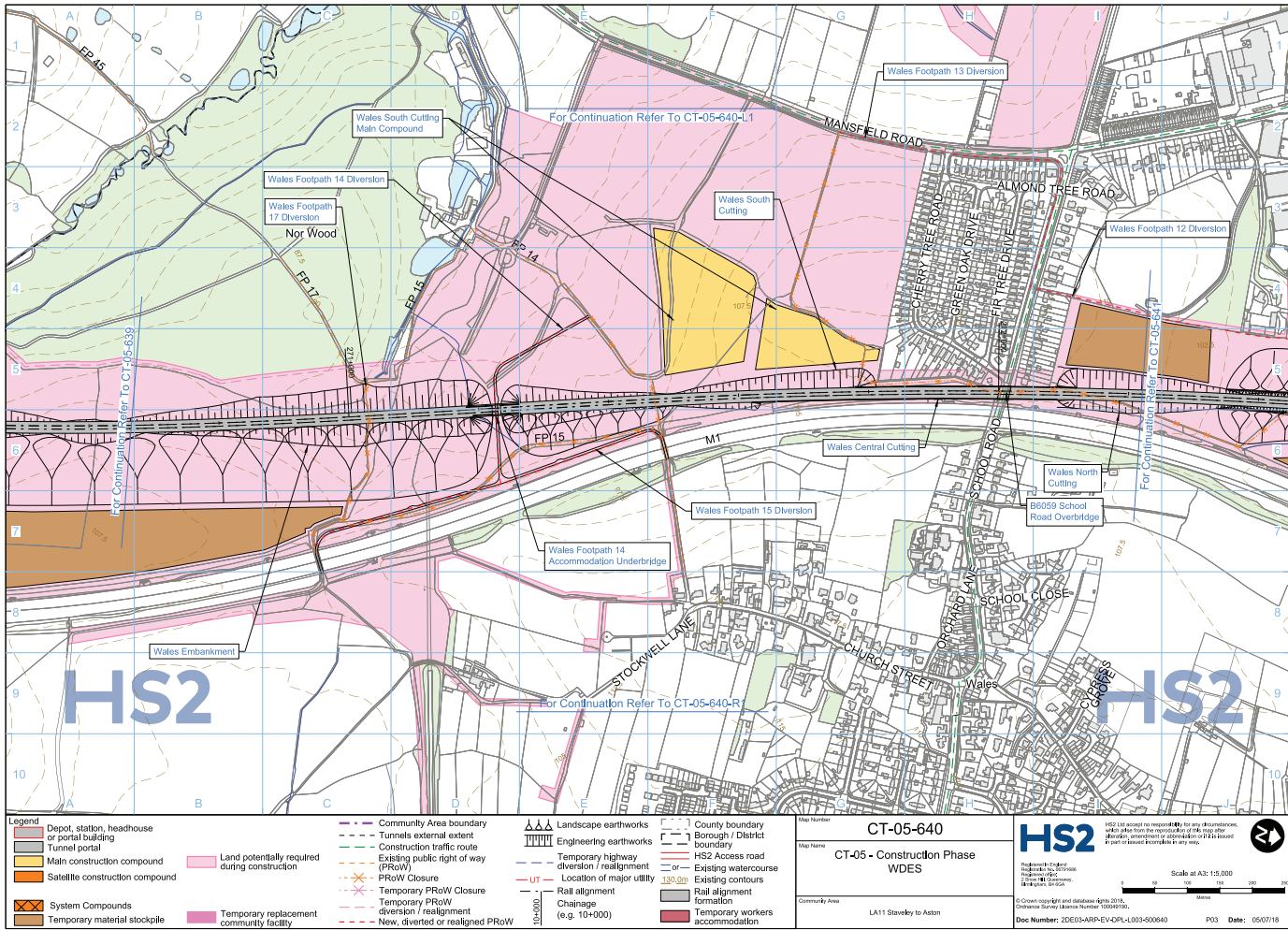
Poplar Farm underpass route



Unfortunately, the route of the main line of HS2 runs adjacent and west of the M1, and thus makes the positioning of the western locks impossible for the following reasons:

- The route only envisaged using the Poplar Farm Underpass to get under the M1 motorway. The HS2 embankment immediately west of the Poplar Farm Underpass would require the canal to turn to the north through 90° before turning 90° to the west to pass under the newly created HS2 viaduct. The removal of Norwood South Culvert requires the canal to deviate to the north through six locks to the motorway underpass. It is not possible to build this structure in the space available. A staircase of six locks needs a minimum of 134 metres; if the gradient is less steep then this rises to a minimum of 1016 metres. This brings with it the added problem of a pumped water supply.
- Noise pollution from the other transport structures would be unacceptable because of the minimum of two hours that canal users would need to spend in the vicinity of the rail and motorways. Even with noise mitigation measures would not lead to an enhancement of the canal journey.

The Trust has revisited the solution of reboring a section of tunnel to address the problem.

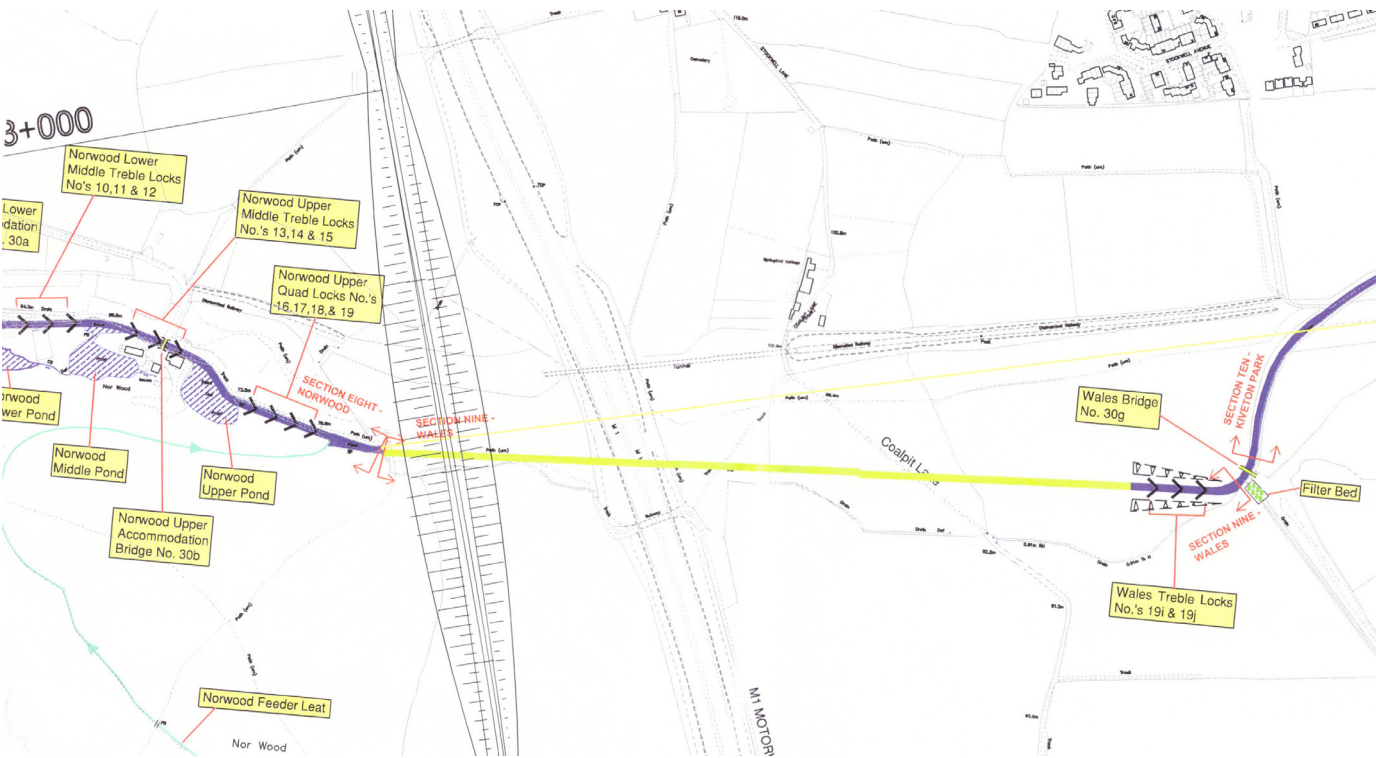
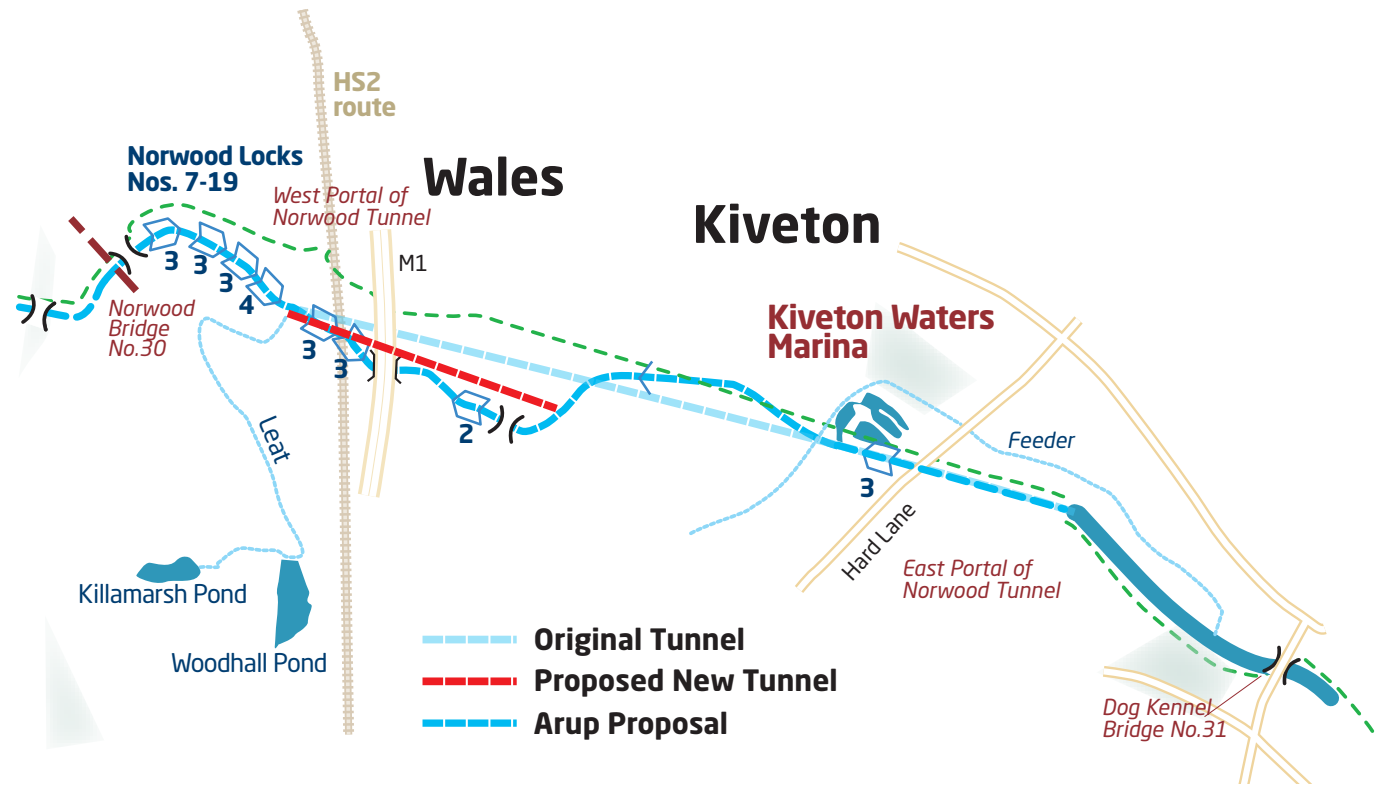


The benefits of the New Norwood Tunnel proposals are:

- Nine fewer locks to build and maintain.
- No requirement to adapt the M1 viaduct.
- No requirement for a viaduct at the HS2 crossing.
- No requirement for an occupation bridge at Coalpit Lane.
- No requirement for a PROW bridge at the Western Portal.
- No requirement for Ground Water Extraction.
- No need to construct and maintain 600m of open cut canal.
- Boaters will transit the tunnel in about ten minutes. Were they to be operating six locks directly adjacent to the M1 and HS2, they would be exposed to air and noise pollution for a period of two hours.

Initial technical and construction advice has been sought from a contractor experienced in this field. The belief is that Highways England would only accept a tunnel boring machine style method to ensure there was no impact or risk to the operational M1 motorway.

The new tunnel is proposed off line from the original to avoid the existing tunnel lining, made ground and original air shafts (now backfilled). The proposed tunnel would be blatantly new, utilising new construction materials, so that tunnel users are aware that this is not the original Brindley tunnel but a 21st Century replacement. The story of the original tunnel would then be interpreted so that this nationally important heritage feature will be recognised once again.



Response 24
Mitigation at Norwood

The Trust believes that a solution needs to be found to enable the restoration of the canal to get under the M1 and the main HS2 line and urges HS2 Ltd. to urgently enter into discussions with Canal and River Trust with a view to agreeing a means of achieving further restoration.

The Trust would reiterate the sentiments contained in the Consultation Summary Report; 6.3.28 makes the following point on mitigation:

“Mitigation measures vary on a case by case basis and are influenced by finding a reasonable balance between environmental and engineering constraints, cost and construction programme impacts, hence ‘where appropriate and practical’ Mitigation measures are not solely decided on cost. The extent and scale of mitigation will be designed to control and reduce significant adverse environmental effects. Priority has to be given to avoiding or preventing effects; and then [if this is not possible], to reducing or abating them; and then, if necessary, to offsetting them through restoration or compensation.”

The Trust is now convinced that the combined noise levels from the Motorway and Railway mean that the only acceptable means of achieving this is by the use of a new, short section of tunnel below the M1 and HS2 line.

The new western portal would be sited adjacent to the original, again to aid with heritage interpretation, and at the same water level. This would maintain the impact of the Norwood Flight, an original set of 13 locks over three triple staircase locks and a quadruple staircase lock immediately to the West.

It is tempting to view the issue of the Norwood Tunnel in isolation, whereas it is in fact part of a much bigger engineering complex, part of which has already been restored, and the second part planned but not yet funded.

The Trust has been working with partners to develop the entire concept of the Norwood Complex as a showcase for the highly original Georgian engineering embodied within the canal.

Response 25
Proportionate mitigation

The Norwood Complex represents groundbreaking Georgian engineering of a type never seen in the UK at the time of its completion. The Trust would ask that, in designing the railway, proper consideration is given to the uniqueness of the Chesterfield Canal and that the railway contributes to its restoration and the maintenance of the landscape characteristics in every way possible rather than the decimation of the setting and character of one of its finest elements - the Norwood flight.

Response 26
Railway drainage attenuation

The proposals for new attenuation ponds and leats ignores the ready availability of Woodhall and Killamarsh ponds as part of a railway drainage management system.

The use of these assets would also recreate a source of water for the Norwood flight of locks and avoid the need to back pump.

5.3 Water supply and railway drainage

Vol. 2: Community Area LA 11 Staveley to Aston Mapbook CT-05-639-R1 Grid H8. The land potentially required during construction includes the Broad Bridge Dyke. This watercourse is the feed for the operational Chesterfield Canal and reservoir spill from Harthill Reservoir. In a really big rainfall event the area may be flooded.

15.4 Effects arising during construction and 15.5 Effects arising from operation

The Pebley and Harthill Reservoirs which feed the eastern, operational section, of the Chesterfield Canal lie to the east of the HS2 route. The impact on drainage flows to these reservoirs and the feeder channel from Harthill reservoir, which has its own catchment in the Norwood tunnel area, needs to be investigated. If the drainage flows are found to be affected the Canal and River Trust will require that these are protected.

15.4 Effects arising during construction Vol. 2: Community Area LA 11 Staveley to Aston Mapbook CT-05-639-R1 Grid H8. The land potentially required during construction includes the Broad Bridge Dyke. This watercourse is the

feed for the operational Chesterfield Canal and reservoir spill from Harthill Reservoir. A suitably sized pipe/culvert/bridge (similar to others on the feeder) will be needed to maintain the canal feed during construction. Any restoration scheme for this land needs to ensure that provision is made for the continued operation of this canal feeder channel and reservoir spill.

Figure 1
Health Deprivation adjacent to the Chesterfield Canal

Peter Brett Associates, June, 2018

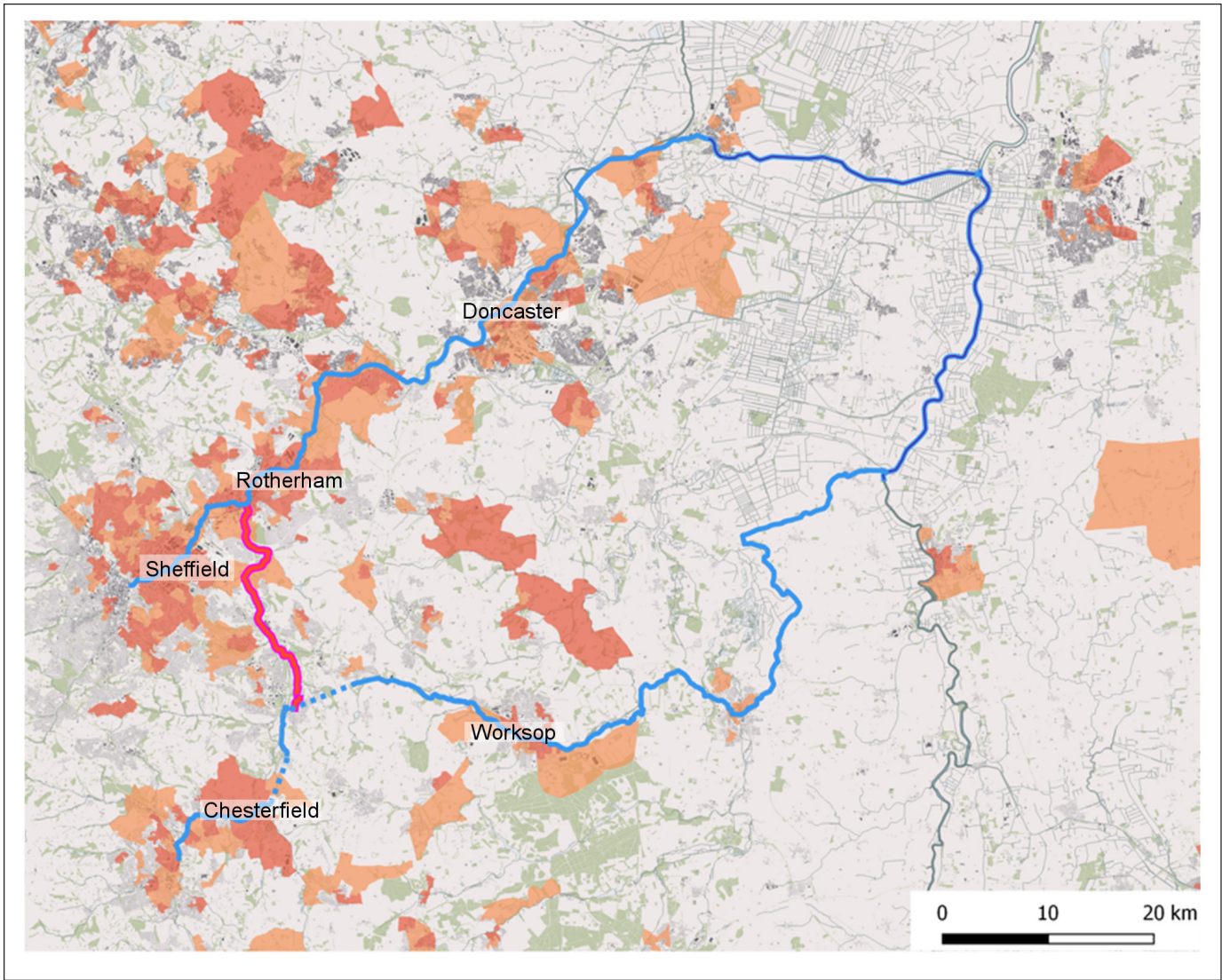
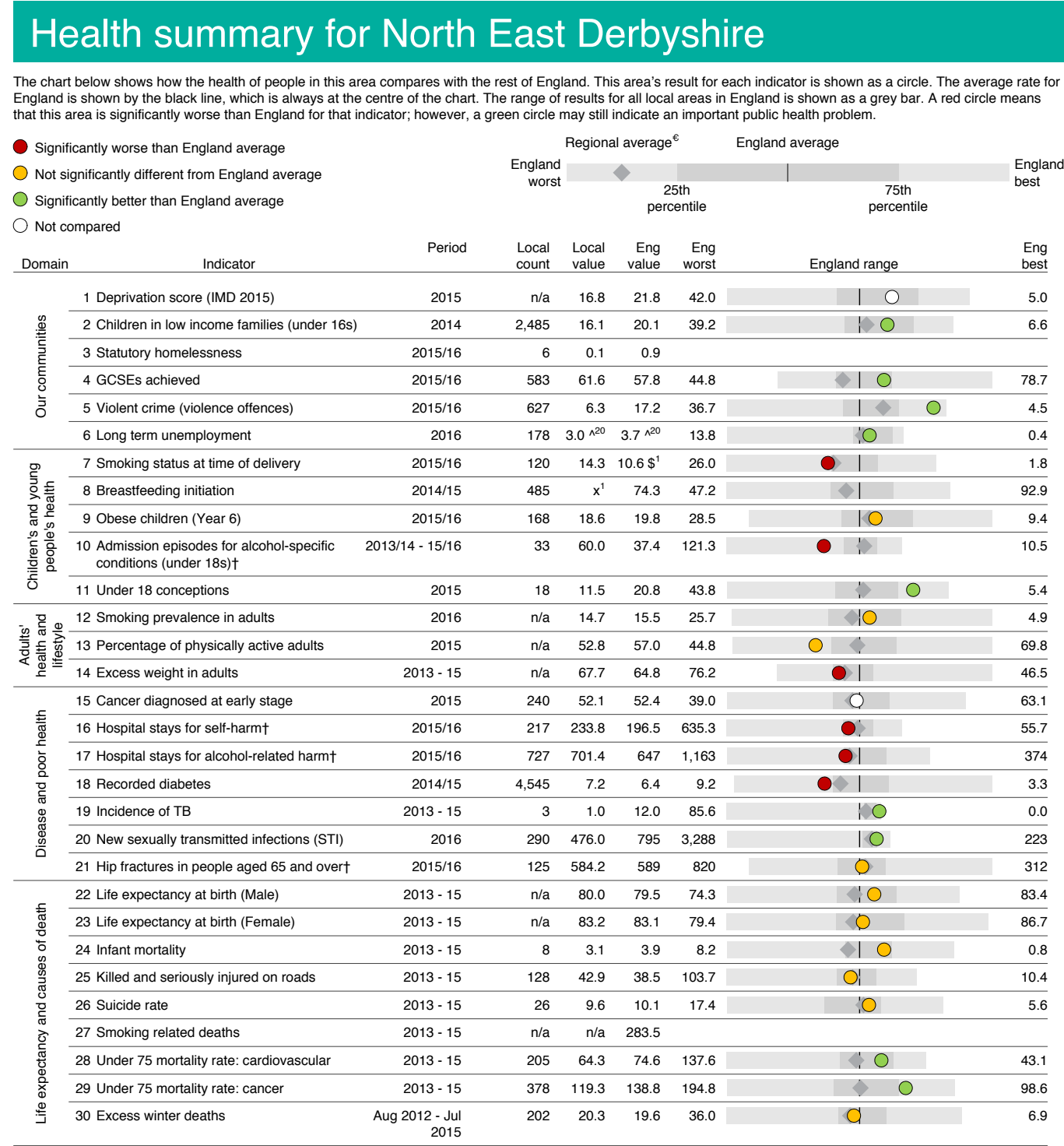


Figure 2

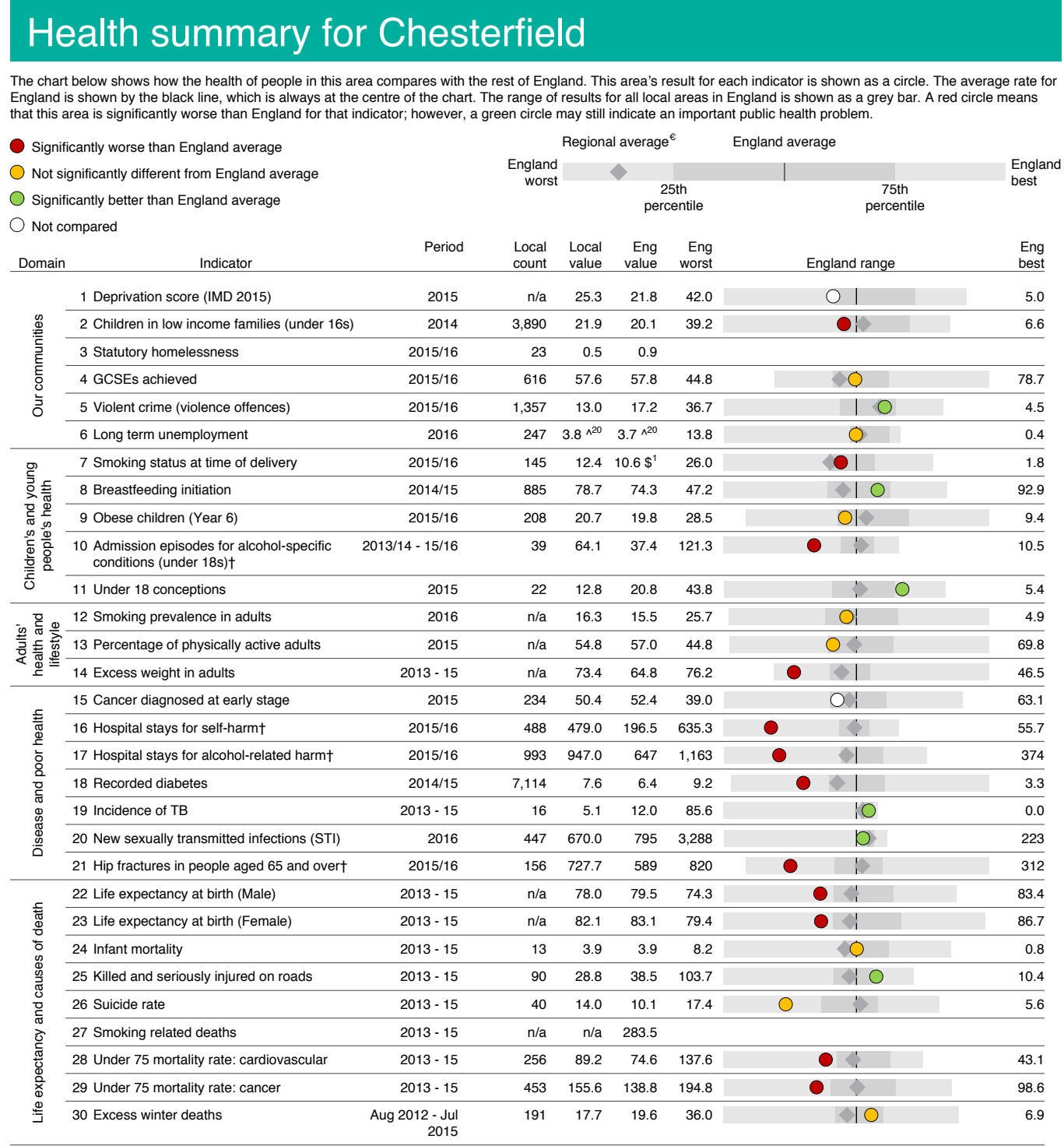


Indicator notes
1 Index of Multiple Deprivation (IMD) 2015 2 % children (under 16) in low income families 3 Eligible homeless people not in priority need, crude rate per 1,000 households 4 5 A*-C including English & Maths, % pupils at end of key stage 4 resident in local authority 5 Recorded violence against the person crimes, crude rate per 1,000 population 6 Crude rate per 1,000 population aged 16-64 7 % of women who smoke at time of delivery 8 % of all mothers who breastfeed their babies in the first 48hrs after delivery 9 % school children in Year 6 (age 10-11) 10 Persons under 18 admitted to hospital due to alcohol-specific conditions, crude rate per 100,000 population 11 Under-18 conception rate per 1,000 females aged 15 to 17 (crude rate) 12 Current smokers (aged 18 and over), Annual Population Survey 13 % adults (aged 16 and over) achieving at least 150 mins physical activity per week, Active People Survey 14 % adults (aged 16 and over) classified as overweight or obese, Active People Survey 15 Experimental statistics - % of cancers diagnosed at stage 1 or 2 16 Directly age sex standardised rate per 100,000 population 17 Admissions involving an alcohol-related primary diagnosis or an alcohol-related external cause (narrow definition), directly age standardised rate per 100,000 population 18 % people (aged 17 and over) on GP registers with a recorded diagnosis of diabetes 19 Crude rate per 100,000 population 20 All new diagnoses (excluding chlamydia under age 25), crude rate per 100,000 population aged 15 to 64 21 Directly age-sex standardised rate of emergency admissions, per 100,000 population aged 65 and over 22, 23 The average number of years a person would expect to live based on contemporary mortality rates 24 Rate of deaths in infants aged under 1 year per 1,000 live births 25 Rate per 100,000 population 26 Directly age standardised mortality rate from suicide and injury of undetermined intent per 100,000 population (aged 10 and over) 27 Directly age standardised rate per 100,000 population aged 35 and over 28 Directly age standardised rate per 100,000 population aged under 75 29 Directly age standardised rate per 100,000 population aged under 75 30 Ratio of excess winter deaths (observed winter deaths minus expected deaths based on non-winter deaths) to average non-winter deaths (three years)

† Indicator has had methodological changes so is not directly comparable with previously released values. €"Regional" refers to the former government regions. ^{^20} Value based on an average of monthly counts x¹ Value not published for data quality reasons \$¹ There is a data quality issue with this value
If 25% or more of areas have no data then the England range is not displayed. Please send any enquiries to healthprofiles@phe.gov.uk

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Figure 3



Indicator notes
1 Index of Multiple Deprivation (IMD) 2015 2 % children (under 16) in low income families 3 Eligible homeless people not in priority need, crude rate per 1,000 households 4 5 A*-C including English & Maths, % pupils at end of key stage 4 resident in local authority 5 Recorded violence against the person crimes, crude rate per 1,000 population 6 Crude rate per 1,000 population aged 16-64 7 % of women who smoke at time of delivery 8 % of all mothers who breastfeed their babies in the first 48hrs after delivery 9 % school children in Year 6 (age 10-11) 10 Persons under 18 admitted to hospital due to alcohol-specific conditions, crude rate per 100,000 population 11 Under-18 conception rate per 1,000 females aged 15 to 17 (crude rate) 12 Current smokers (aged 18 and over), Annual Population Survey 13 % adults (aged 16 and over) achieving at least 150 mins physical activity per week, Active People Survey 14 % adults (aged 16 and over) classified as overweight or obese, Active People Survey 15 Experimental statistics - % of cancers diagnosed at stage 1 or 2 16 Directly age sex standardised rate per 100,000 population 17 Admissions involving an alcohol-related primary diagnosis or an alcohol-related external cause (narrow definition), directly age standardised rate per 100,000 population 18 % people (aged 17 and over) on GP registers with a recorded diagnosis of diabetes 19 Crude rate per 100,000 population 20 All new diagnoses (excluding chlamydia under age 25), crude rate per 100,000 population aged 15 to 64 21 Directly age-sex standardised rate of emergency admissions, per 100,000 population aged 65 and over 22, 23 The average number of years a person would expect to live based on contemporary mortality rates 24 Rate of deaths in infants aged under 1 year per 1,000 live births 25 Rate per 100,000 population 26 Directly age standardised mortality rate from suicide and injury of undetermined intent per 100,000 population (aged 10 and over) 27 Directly age standardised rate per 100,000 population aged 35 and over 28 Directly age standardised rate per 100,000 population aged under 75 29 Directly age standardised rate per 100,000 population aged under 75 30 Ratio of excess winter deaths (observed winter deaths minus expected deaths based on non-winter deaths) to average non-winter deaths (three years)

† Indicator has had methodological changes so is not directly comparable with previously released values. €"Regional" refers to the former government regions. ^{^20} Value based on an average of monthly counts \$¹ There is a data quality issue with this value
If 25% or more of areas have no data then the England range is not displayed. Please send any enquiries to healthprofiles@phe.gov.uk

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Figure 4
Derbyshire County Council Rapid Health Impact Assessment of HS2, 2014

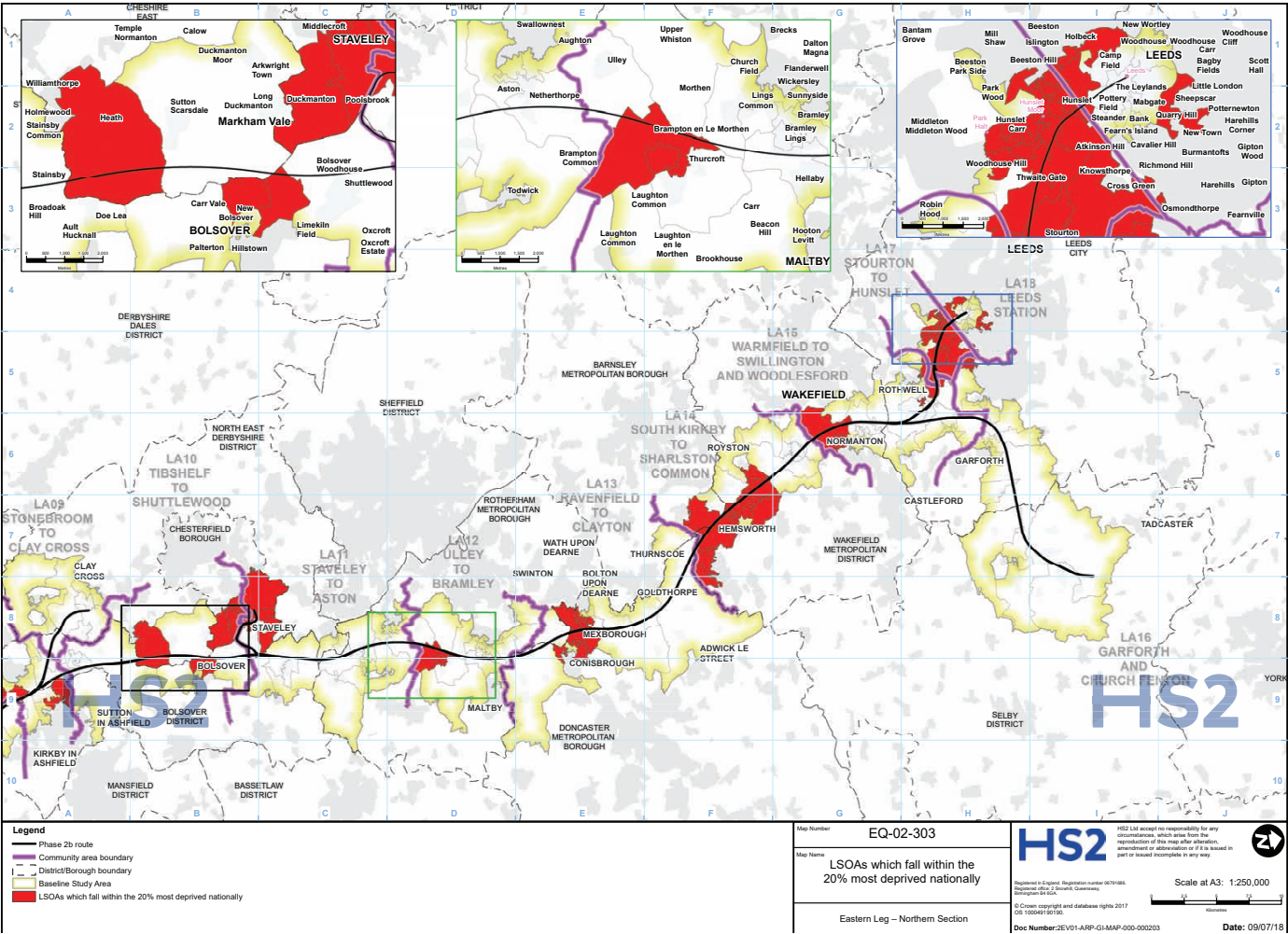
The following table summarises issues identified as having negative impacts on mental health and well-being as a cause of ill health:

Health issues with a negative impact
Negative emotions/ feelings over the protracted length of the construction phase
Reduction in green belt areas/ open spaces may mean fewer opportunities to find peace and relaxation
Fatigue and stress may result from increased journey times by road
Sleep deprivation and/or stress due to noise and/or vibration
Anxiety over the threat of a compulsory purchase order/ sale price/ the advisability of selling early/ not being able to sell at all and feeling ‘trapped’
Anxiety over the construction mess
May make walking the dog (partly for health reasons) less enjoyable
Anxiety over the number of trains per hour
Exacerbation of depression
People living in poor areas where community spirit is already low may be further divided and made to feel worthless and unimportant
People may use the line to commit suicide
Lack of information causes worry, particularly for elderly residents who may fear change/ upheaval
Distraught at the thought of not being able to enjoy a peaceful garden in homes close to the line/ depot in Staveley
Residents disturbed by construction activity could be entitled to compensation
Residents disturbed by construction activity may feel the need to take days away/ go on holiday, with cost implications

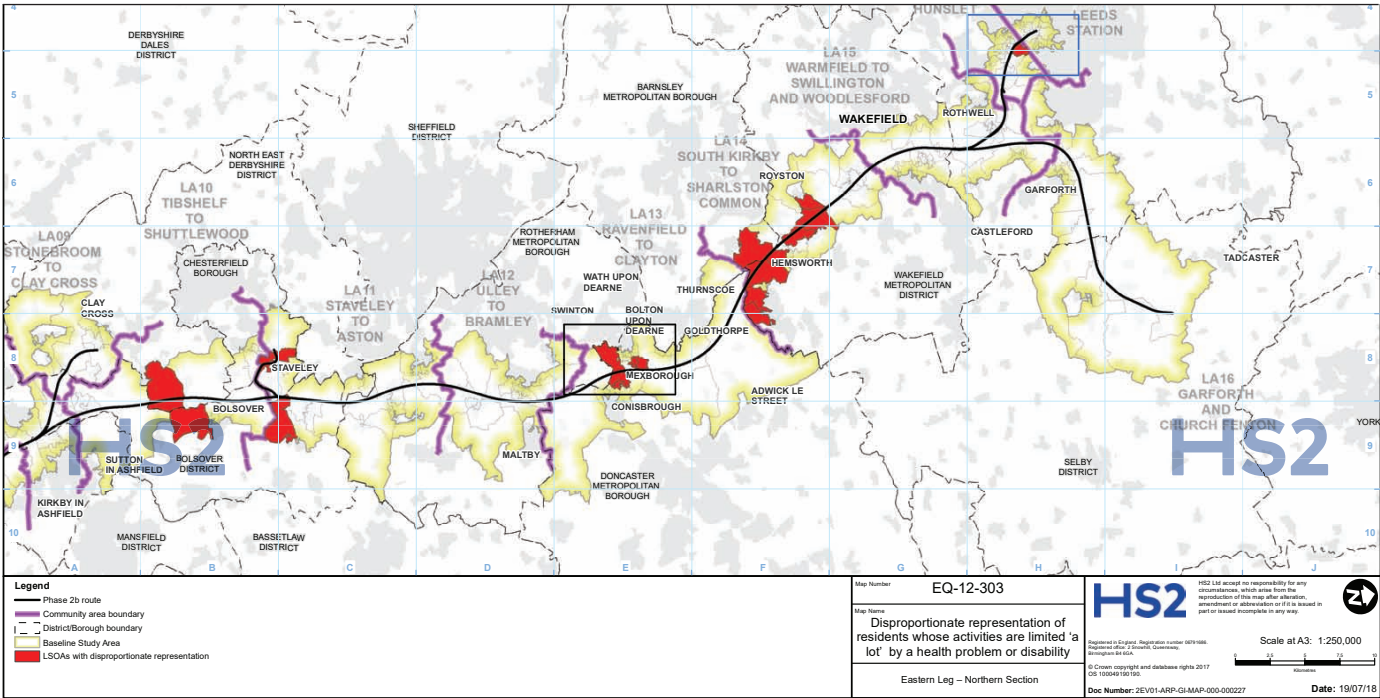
Figure 5
Waterways and Wellbeing
Canal and River Trust 2017

	Four ONS Subjective Wellbeing Measures Thresholds – Proportion of respondents in each threshold (%)															
	Thresholds – Proportion of respondents in each threshold (%)				Worthwhile				Happiness				Anxiety			
	Low	Medium	High	Very High	Low	Medium	High	Very High	Low	Medium	High	Very High	Low	Medium	High	Very High
	0–4	5–6	7–8	9–10	0–4	5–6	7–8	9–10	0–4	5–6	7–8	9–10	0–4	5–6	7–8	9–10
ONS																
England (2015–16)	4.55	14.29	52.39	28.77	3.55	12.90	49.32	34.23	8.75	16.52	40.65	34.08	40.59	23.26	16.78	19.37
Wales (2015–16)	5.18	14.37	50.74	29.71	3.99	12.55	49.36	34.10	9.55	16.01	40.26	34.17	41.75	21.17	16.25	20.83
Results from the local community surveys in fourteen Longitudinal Study Areas (March 2017)																
All (people living within 1km of the waterway)	5.5	16	41.3	36.3	4.2	13.1	39.8	41	8.3	13.4	33.7	43.1	59.3	15.3	10.1	14
Towpath visitors/users:																
Regular (at least once a fortnight)	4.4	12.6	43.1	39	2.9	10.6	40.5	44.4	7.2	11.7	34.6	45.6	59	15.7	9.5	14.5
Occasional (visited at least once in the last 12 months)	4.1	16.1	43.1	35.9	3.6	12.2	41.4	41.8	7.5	13.2	34.4	43.9	60.2	15.8	9.7	13.4
Infrequent (not visited in the last 12 months / never visited)	8.2	20.2	38.3	33.1	6.5	17.4	37.5	35.8	10.4	17	32.2	38.9	58.8	14.4	11.3	13.9
If visited in the last two days	4.1	12.3	40.4	42.3	2.4	9.6	39.1	47.3	6.3	9.8	32.5	50.3	61.4	15.6	8.2	13.4

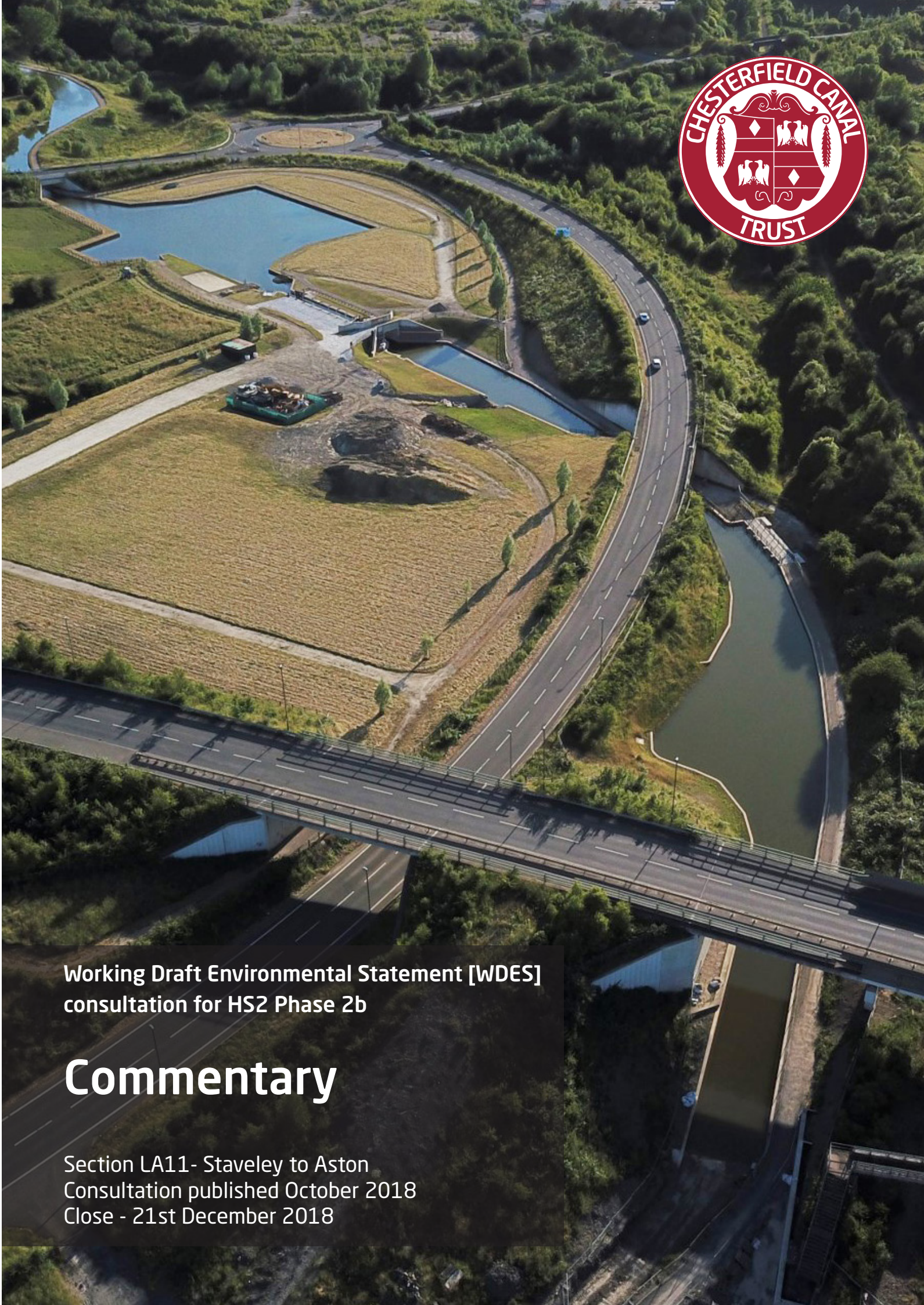
Figures 6 and 7
Deprivation and Health problems



Areas of multiple deprivation - HS2 WDES 2018



Areas with high reporting of limiting health problems or disabilities. - HS2 WDES 2018



Working Draft Environmental Statement [WDES]
consultation for HS2 Phase 2b

Commentary

Section LA11- Staveley to Aston
Consultation published October 2018
Close - 21st December 2018

Overview of the Proposed Scheme

- 2.1.11 Chesterfield Canal is listed as part of the key transport infrastructure and as such should be accommodated in the scheme design.
- 2.1.28 Chesterfield Canal restoration is safeguarded in the North East Derbyshire Local Plan and Chesterfield Borough Council Local Plan and should therefore be accommodated in the design.
- 2.1.29 Canal restoration at Staveley was underway prior to the HS2 route announcement and would reasonably be expected to have been completed already were it not for the uncertainty caused by HS2 itself. It should therefore be included as a project likely to be constructed.
- 2.1.30 Severance of the Chesterfield Canal at Staveley by construction of the HS2 IMD line will have significant, permanent negative cumulative impacts and should therefore be included in the formal ES.
- 2.2.8 The construction of the railway and its programme generates construction noise and potential disruption for 4½ years in Staveley and just over 4 years at Wales South/Norwood.
- 2.2.22 Wales embankment needs provision for overspanning the future restoration alignment of the Chesterfield Canal with a viaduct spanning over a minimum of three new canal locks required to lift the canal up the hillside from the location of the pond at the west portal of the original Norwood Tunnel (CT-06-640, C5). Further eastward extension of the canal thereafter will require provision of a further three locks to achieve the level of the farm underpass beneath the adjacent M1 motorway (C7).

A proposed alternative is the provision of a new tunnel running approximately west to east for 600 metres from the west portal of the original Norwood Tunnel and extending into agricultural land to the east of the motorway (B10-C10), thereby diverting the canal underneath all HS2 constructions. From here it can be connected at level gradient directly into the existing fishing lakes (intended new canal marina site) at Kiveton Waters. This tunnel has been raised on a number of occasions over the past year with both HS2 and DCLG.

The issue of protection of the canal route has been raised on a number of occasions over the past five and a half years with both HS2 and DCLG but remains unaddressed by the current design. Embankment profiles, drainage and footpath links need to be revised to suit any change intended to protect the canal restoration. Although just outside the Derbyshire County / Rotherham Metropolitan Borough Council Boundary, the impact of the present HS2 design fundamentally and detrimentally affects the multi-million pound restoration work already completed within the county of Derbyshire and jeopardises the longer term ongoing intended restoration of the canal by the Chesterfield Canal Partnership in that it fails to safeguard the canal route as required by DMRB Volume 11 - Section 3 - Part 6 - Para 11.7.

- 2.2.33 There is no mention of accommodation of the proposed Oxcroft Branch Greenway which was discussed with HS2 engagement team. This was intended to provide an alternate linkage in place of the length of the Clowne Branch to be lost to rail development and to provide future community Non-Motorised User (NMU) linkage from Oxcroft and Stanfree toward Staveley, the Trans Pennine Trail (TPT) and Chesterfield Canal. The Oxcroft M1 underpass provides the only substantive 'bridge' crossing beneath both the M1 and future HS2 routes following the advised intended closure of the western end of the Clowne Branch Greenway by HS2.

If both routes above are lost to public use, FP28 will need to be upgraded to Bridleway standard and definitive status and suitable provision also made for its safe crossing of the B6419. This will enable an onward route from Creswell, Clowne and Oxcroft toward Staveley, the TPT and the Chesterfield Canal. Possibly a similar standard and status upgrade is required in respect of FP27 to provide the NMU linkage that will be lost, though an alternative would be the provision of an additional NMU route alongside HS2 to link with the existing stone surfaced track at Markham Vale and shown on Plan CT-06-635 (B4).

It is not clear why Lowgates Road bridge requires such substantive track clearance or raising above existing ground level but there is little shown land-take or impact on adjacent premises or businesses.

A new balancing pond is shown located on high ground to the 'west of the Staveley spur' but outfall is by ditch crossing the restored Chesterfield Canal. Outfall may need to be into the canal under a discharge consent with and by consent of the owner, DCC. An oil interceptor may be required at the pond outfall to ensure that water is of sufficiently clean quality prior to discharge into the canal.

No mention is made of the required crossing of the restoration route of the Chesterfield Canal which presently extends in navigable form to a location just 15m from the existing rail corridor boundary. The canal is undergoing active restoration and has been advised repeatedly to both HS2 and DCLG for over five and a half years. Water level in the restored canal section has been set to allow sufficient clearance to pass beneath the existing rail track level.

To accord with DMRB Volume 11 - Section 3 - Part 6 - Para 11.7, provision should be made for maintaining continuity of the canal beneath the proposed rail line to facilitate its ongoing restoration and this

requirement appears to have been omitted from current draft HS2 design. It is noted with concern that Chesterfield Canal is recognised by HS2 through its inclusion at Sections 2.1.23, 10.3.32 and 14.3.16 in this LA11 report, though it is not shown on any plans.

Realignment of FP47 as shown would introduce an unacceptable gradient on approach to the rail bridge. A ramped infill would sever the restoration route of the Chesterfield canal unless FP47 bridge is extended or replicated to link with the existing route on the north side of the canal 'cutting'.

The diverted line of FP50 will require an additional bridge crossing of the recently restored length of the Chesterfield Canal immediately to the east of Eckington Road bridge.

The landscape mitigation area includes the towpath of the Chesterfield Canal. Inclusion in the mitigation area will sever access for the public and does not take into account the management and maintenance requirements of the canal infrastructure.

The area identified south of the Staveley spur as new public realm/community facility is inappropriate for two reasons. Firstly, this area is already in the public realm, is a regeneration site development by DCC Markham Vale Employment Growth Zone project as part of the Canal restoration so will therefore not contribute to 'new' community facility by HS2. Secondly, the Staveley Town Basin area has been developed in order to provide income to sustain the Chesterfield Canal in perpetuity. Seizure of this land by HS2 will therefore reduce the overall public realm viability of the whole canal section causing significant sunk cost losses to DCC as well as on-going additional liability costs.

Staveley West Embankment and its toe drain are shown encroaching into the toe of the support embankment to the Staveley Loop Road (Ireland Close). The toe of this proposed embankment also extends over and buries the outfall drain located immediately alongside the road embankment on its north side and serving as outfall and drain facility for the restored Chesterfield Canal.

Proposed lowering of Hall Lane by 6m at its crossing of the Staveley spur may sever an unmapped private surface water outfall drain serving the adjacent Hall Lane Landfill site to the north of the IMD which presently runs alongside the rail corridor on its south side and discharges to the River Rother. The drain is located close to where the tracks start to branch at the entrance to the IMD, crossing first the rail corridor then Hall Lane and the depth needs to be verified.

2.3.74 Norwood Viaduct Satellite Compound

A satisfactory access cannot be achieved to serve the site as drawn on the plan as access would require the clearance of vegetation to the left on exit to facilitate visibility splays on accordance with 60 mph speed limit. Fronting vegetation beyond the land shown for the compound restricts exit visibility and could present a further constraint. Topography could present a highway problem due to the gradient on the derestricted road and may impact on stopping distances for heavy vehicles. Absence of exit visibility onto a derestricted road is of significant concern to DCC as the Highway Authority.

This site has been assessed based on the information / plans provided by HS2 and on an individual basis looking at access to the existing local highway network issues only. No assumption has been made as to whether the boundary of a site necessarily abuts the public highway, it will be for the promoter to ensure that rights to access a site exist.

2.3.125 Staveley IMD South Chord Viaduct Satellite Compound

A satisfactory access cannot be achieved to serve the site as drawn on the plan. There are no pedestrian footways in the vicinity, the closest is roughly 200 metres to the south on the opposite side of Hall Lane; bus stops are 600 - 700 metres to the south on Hall Lane; the Cycle network/ Bridleway is approximately 500 metres to the south accessed via Hall Lane; no PRoW are affected. All main amenities of Staveley are within one mile of the site.

This site is separated from the closest public highway by an existing rail line and 'land potentially required during construction' therefore creation of an access would require either a structure to cross the line or a (temporary) closure. In the event that crossing the rail line can be overcome, creation of an acceptable access may require land beyond that demonstrated as being 'potentially required during construction'. That said, it may be possible to introduce temporary measures to form an access for the duration of the Works. Notwithstanding, realignment of Hall Lane is demonstrated and, in the event that this work precedes the creation of the depot, access to the site should be incorporated within the design of the diverted road.

This site has been assessed based on the information / plans provided by HS2 and on an individual basis looking at access to the existing local highway network issues only. No assumption has been made as to whether the boundary of a site necessarily abuts the public highway, it will be for the promoter to ensure that rights to access a site exist.

2.3.131 Staveley IMD Satellite Compound

A satisfactory access cannot be achieved to serve the site as drawn on the plan. A pedestrian footway linking to the south only from proposed Depot Access; bus stops are 400 – 500 metres to the south on Hall Lane; the cycle network/ Bridleway is approximately 300 metres to the south accessed via Hall Lane; no PRow are affected. All main amenities of Staveley are within one mile of the site.

This site is separated from the closest public highway by ‘land potentially required during construction’ and land demonstrated as being allocated as ‘Depot’. It is assumed that access would be taken via that proposed to serve the proposed Depot which, it would appear, requires modifications to the existing public highway (Hall Lane). Detailed layout designs complying with current design guidance will need to be submitted for the Depot access/ Hall Lane modifications for Constructional Approval prior to access being taken.

This site has been assessed based on the information / plans provided by HS2 and on an individual basis looking at access to the existing local highway network issues only. No assumption has been made as to whether the boundary of a site necessarily abuts the public highway, it will be for the promoter to ensure that rights to access a site exist.

2.3.144 Works Road Rail Systems Satellite Compound

A satisfactory access cannot be achieved to serve the site as drawn on the plan. There is a narrow pedestrian footway on one side of the existing highway, this being on the opposite side of the road to the eastern compound and same side of the road to the western compound. Bus stops are approximately 350 metres to the south of the eastern compound on Works Road; the cycle network is approximately 650 metres to the south of the eastern compound and accessed from Works Road; PRow are likely to be affected by the eastern compound. The limited amenities of New Whittington are within 1½ miles with more extensive amenities of Staveley approximately two miles from the site.

This is a split site with the east and west parts approximately 350 metres apart each on the southern side of Works Road / Whittington Road. Both sites are separated from the closest public highway by ‘land potentially required during construction’.

The closest highway to the eastern site is Works Road where the highway is located within a cutting with substantial retaining walls to each side. There is no footway or margin on the proposed compound side of the carriageway. In addition, visibility sightlines would be compromised by the existing carriageway alignment. Given the short duration of time this compound is proposed to operate, it may be possible to introduce temporary traffic management measures to accommodate an access; however, significant engineering works would also be required.

It is possible that a satisfactory access may be created to the western site using the land identified as being ‘potentially required during construction’ although, due to the change in speed limit across the frontage of this land, this would be likely to involve significant clearance of existing boundary hedges in order to achieve adequate visibility sightlines. Alternatively, again due to the perceived duration of use of this site, it may be possible to introduce temporary traffic management measures to accommodate an access.

This site has been assessed based on the information / plans provided by HS2 and on an individual basis looking at access to the existing local highway network issues only. No assumption has been made as to whether the boundary of a site necessarily abuts the public highway, it will be for the promoter to ensure that rights to access a site exist.

2.3.150 In the other community area reports for Derbyshire it has been unclear which of the main and satellite compounds in this area, if any, would remain in place for the rail systems works. The wording here would seem to suggest that the Staveley site will be fulfilling this role for the whole eastern leg of the scheme. This needs to be clarified as it would seem to disagree with information displayed in figure 9, page 63/72, which shows all of the main and satellite compounds in this community area closing by Q3 2030; yet rail systems works are not due to begin until Q3 2031 and end in Q4 2033.

2.4.11 Despite the ‘dark sky; lighting installation’, the scale of the IMD is likely to create light pollution and change the night ecology of the Rother Valley in Staveley.

2.5.3 Bluebank Pools (Chesterfield Canal) Local Wildlife Site has been overlooked.

2.5.153 Excavated material (defined as excluding topsoil and subsoil) generated across the Proposed Scheme would be reused as engineering fill material or in the environmental mitigation earthworks of the Proposed Scheme, where suitable and reasonably practicable, either with or without treatment. Does this include the IMD site? If so, extra protections need to be considered.

Stakeholder Engagement and Consultation

3.3.2 Chesterfield Canal is identified as one of the main themes to emerge from stakeholder engagement however

severance of the canal restoration by the construction of the IMD line is not addressed.

3.4.5 Chesterfield Canal Trust is identified as one of the expert technical and specialist groups consulted by HS2 Ltd.

3.4.14 The Chesterfield Canal Trust does not own any canal assets - it is however a major stakeholder in the restoration of the canal. The canal and infrastructure in the Staveley area is wholly owned and maintained by DCC, with regular contributions from the Chesterfield Canal Trust.

Agriculture, Forestry and Soils

4.3.10 Woodall and Killamarsh Ponds are identified as collection points for water between Woodall and Norwood. Both are part of the historic water supply system for the Chesterfield Canal and should be protected as such.

4.3.34 Nor Wood is identified as an Ancient Woodland and local wildlife site. It is proposed to take 18ha [30%] of Nor Wood for HS2.

4.4.3 Wales footpath 14 accommodation underbridge - to mitigate severance.

Air Quality

5.4.2 Keeping soil stockpiles away from sensitive receptors where reasonably practicable, also taking into account the prevailing wind direction relative to sensitive receptors.

Community

6.2.3 It should be recognised that not all promoted routes for vulnerable users are dedicated as public rights of way. This should not lessen the value placed on them but rather ensure that safeguards are in place to accommodate them to avoid issues of severance in the network.

6.2.4 The Trust supports DCC’s request that reference to “public footpaths and routes” could be replaced with “all statutory and non- statutory rights of way”, or for HS2 to be clear that it is all public rights of way and all other vulnerable user pathways.

When reinstating or sourcing alternative public footpaths in this locality, HS2 should pay particular attention to the impact of disrupted access upon those with physical disabilities, such as wheelchair users, to ensure any particular needs are catered for as part of the planning for temporary diversions or permanent route/ footpath changes.

6.2.6 The Trust welcomes the statement that PRow changes will be confirmed in advance of the submission of the draft Bill.

6.4.11 Chesterfield Canal should be included here and severance of the canal restoration addressed. It should be noted that 25% of amenity land between Hall Lane and Barrow Hill will be unavailable for over a year and 30% of accessible land in the Norwood area will be unavailable for 3 years 3 months. On return each area of public amenity land will have been reduced by 5%.

6.4.34 Staveley West cutting permanent realignment of the Trans Pennine Trail and Cuckoo Way will need assessing at design to maximise suitability of the configurations.

The proposals to realign both the TPT and the Cuckoo Way at Staveley West Cutting are of interest to DCC. Without taking into account other comments made elsewhere regarding the ongoing restoration of the Chesterfield Canal, on the face of things, the proposals for the diversions of these two routes, and also Staveley FP1 and FP47 and the TPT running north to south, are sound. The replacement TPT/Cuckoo Way routes must be constructed to a multi-user route standard, including the design of the Staveley Bridleway 47 overbridge and subsequent link onto Staveley BW48 and onward northbound section of the TPT. Because of the land levels in this area (a steep slope down and then up), the overbridge will need to extend the full length of the realignment path, to the connection with Staveley FP71. East to west connections of the TPT can only be resolved when the matter of the canal crossing is addressed.

HS2 currently does not take the ongoing restoration work on the Chesterfield canal into account with these designs. The canal restoration is one of a portfolio of large economic regeneration projects in the Staveley area, and is crucial to the development of green infrastructure and the visitor economy in the wider Chesterfield area. An integrated solution is required to provision of canal route and the TPT, alongside the delivery of HS2.

The construction phase drawing CT-05-631-R1 shows that the potential area used for HS2 construction includes considerable lengths of the land used by Brimington FP1 / Staveley Staveley FP1 (which double as the Trans Pennine Trail and the Cuckoo Way), between Troughbrook Road at Hollingwood and Hall Lane at Staveley. The construction area also takes in a crucial access point onto the TPT at Mill Green, Staveley.

This route is a crucial public access corridor for walkers and cyclists, both for leisure and commuting use. It must remain accessible throughout the construction period, or alternative suitable provision made for regular users.

6.5.6 The Chesterfield Canal restoration will be severed by the construction of the IMD line. The cumulative impact of this is significant and should be evaluated in the Environmental Statement.

Ecology and Biodiversity

7.3.3 Statutory and non-statutory designated sites are shown on maps series CT-10 - The Trust believes that a similar approach should be taken with depicting heritage assets [see 9.3.7].

7.3.18 The proposals do not identify the recently created and improved waterbodies as part of the Markham Vale project. Chesterfield Canal has been omitted.

7.4.12 Chesterfield Canal has been omitted. Severance of the canal restoration by the construction of the IMD line as designed will impact on the long-term hydrological viability of the section already in water.

7.4.30 Chesterfield Canal has been omitted from the table and therefore acknowledgment that construction as planned will sever the canal.

Health

8.4.23 Due to the impact on PRow in this locality HS2 should pay particular attention to the impact of disrupted access upon those with physical disabilities, such as wheelchair users, to ensure any particular needs are catered for as part of the planning for temporary diversions or permanent route/footpath changes.

8.4.27 Chesterfield Canal should be included as a social capital receptor and the impact of severance of the restoration by HS2 assessed.

Historic Environment

9.2.8 The assessment of the impact of HS2 construction on the Chesterfield Canal at Staveley and Norwood as ‘unlikely to be significant’ is incorrect.

9.4.1 The proposed scheme has made no provision for the Chesterfield Canal at Staveley or Norwood.

9.4.5 & 9.4.14 An assessment of the temporary impacts and effects on the Chesterfield Canal and its supporting infrastructure (including Staveley Town Basin) has been omitted and should be included here

Land quality

10.3.32 The Chesterfield Canal is under construction and the route lies fully within the proposed construction area at Norwood and Staveley. Further the reference to the canal at Norwood as ‘disused’ should be removed and replaced with ‘under construction’.

Note also that the use of Bullet points in LA10 - para 10.3.32 more clearly identifies the water feature intersections than the use of plain continuous text used in report LA11 - para 10.3.32. Bullet form is preferable.

This paragraph claims that the canal is 100m from the proposed route of the railway at Staveley Town Basin - it is far closer

Landscape and Visual

11.1.4 Plans LV-02-450 a and b are based on aerial photography from as far back as 2011(?) and do not include recent developments at either Staveley Town Basin nor at the former Hartington Colliery.

11.3.2 The Chesterfield Canal has been omitted from the existing landscape baseline and should be included here.

11.3.10 Table 31: The presence and on-going restoration of the Chesterfield Canal is acknowledged here but is not otherwise appraised in the chapter.

11.3.16 Not all PRow have been identified by HS2 and some are incorrectly mapped.

Views from the Chesterfield Canal restoration route (Cuckoo Way) should be included here.

11.4.8 Table 32: Impacts to the Chesterfield Canal have been overlooked.

11.4.12 Table 33: Impacts on the users of the Cuckoo Way have been assessed without reference to this being the route of the Chesterfield Canal restoration (underway).

11.4.15 The high magnitude of change and major adverse effect on the Chesterfield Canal identified in Table 33 has been omitted here.

11.5.2 The new areas of public realm / replacement community facilities to be created already presently exist and are available to the public. Two sites as grassland and the recently restored canal. The area adjacent to Staveley Town Basin has also been earmarked for a mixed-use commercial development. Sites are owned by DCC and part of the Chesterfield Canal restoration. The land forms part of the sustainability plan for the canal and its removal by HS2 will have direct economic consequences to the scheme and DCC’s liabilities.

It is inappropriate to claim an area already in the public realm as mitigation for the HS2 scheme. The proposed mitigation scheme comes without a comprehensive access and management plan and is likely to constitute an additional liability to DCC in addition to the loss acquired from failure to develop the current model. The proposed public realm mitigation comes a long way short of mitigating the impact of severing the canal restoration at Staveley and Norwood and loss of public realm as a result.

11.5.4 Table 34: Staveley Town Basin is described as ‘partially restored’; the basin was completed in 2012 and the canal now extends beyond Eckington Road Bridge, which is the current construction site.

Tree planting along the Chesterfield Canal and Staveley Town Basin falls a long way short of adequate mitigation for the ‘high magnitude of change and major adverse effect’ identified.

Socio-economics

The Trust believes the negative socio-economic impacts of the railway are downplayed in the WDES.

Sound, noise and vibration

Staveley Town Basin has the potential for residential moorings for canal boats. The noise impact from trains needs to be assessed.

Traffic and Transport

14.3.13 The Trans Pennine Trail and Cuckoo Way are acknowledged as the busiest routes surveyed.

14.3.16 The Chesterfield Canal is acknowledged as a navigable canal and under construction, however the project design severs the canal at Staveley and Norwood.

14.4.26 Under DMRB Volume 11 - Section 3 - Part 6 - Para 11.7, provision should be made for ongoing restoration of the canal and this appears to have been entirely omitted.

The WDES document suggests that the Proposed Scheme would have ‘no significant effect’ on canal restoration. The Trust believes that this statement is TOTALLY disingenuous on the part of HS2 Ltd. The scheme has made no accommodation for the canal at Staveley or Norwood and will in fact sever the route and cause the already restored section in Derbyshire to be redundant.

It is noted that potential effects on PRow will be reported in the formal ES. This will need to take into account any effects on how traffic uses the network; i.e. reassignment to different routes, re-timing of journeys or the release of suppressed demand.

14.5.6 There is no reference to the Chesterfield and Staveley Regeneration Route. HS2 was made aware of development proposals back in the January 2013 consultation and as a result adjusted the footprint of the IMD in subsequent publications in 2017. Derbyshire County Council and its development partners are extremely disappointed that the current footprint of the depot compromises the route, and therefore sterilises development opportunities around the Staveley Works Area.

Alongside the Chesterfield Station Masterplan, the Northern Growth Zone is designed to accommodate and complement the Infrastructure Maintenance Depot (IMD) at Staveley and connectivity improvements between the IMD and Chesterfield Station delivered through the Chesterfield Staveley Regeneration Route (CSRR). This is a major intervention, facilitating significant housing and employment development, and is receiving significant current investment towards design and business case preparation. The major landowners along this corridor are fully engaged in this work. The IMD, though, places significant constraints on both the quantum of development achievable and on the alignment of the CSRR. These issues are acknowledged by HS2 Ltd, which is welcome, but much remains to be done through further engagement to ensure that the needs of all parties can be met in full.

At this stage, the operational impacts of the IMD are not fully understood. Inevitably, though, maintenance activities will be concentrated within off-peak periods for passenger services, mostly at night. It is anticipated that lighting at the IMD, movement of maintenance trains and vehicular traffic associated with its workforce shift changes could all be significant impacts on adjacent communities.

14.5.14 The suggestion to reinstate FP1 via footbridge for users of the TPT & Cuckoo Way (the former including cyclists and equestrian users) is unfeasible.

Realignment of FP47 as shown would introduce an unacceptable gradient on approach to the rail bridge. A

ramped infill would sever the restoration route of the Chesterfield canal unless FP47 bridge is extended or replicated to link with the existing route on the north side of the canal cutting.

The diverted line of FP50 will require an additional bridge crossing of the recently restored length of the Chesterfield Canal immediately to the east of Eckington Road bridge.

Water resources and flood risk

15.3 The land potentially required during construction includes the Broad Bridge Dyke. This watercourse is the feed for the operational Chesterfield Canal and reservoir spill from Harthill Reservoir in the event of a heavy rainfall event the area may be flooded.

15.4 & 15.5 The Pebley and Harthill Reservoirs which feed the eastern, operational section, of the Chesterfield Canal lie to the east of the HS2 route. The impact on drainage flows to these reservoirs and the feeder channel from Harthill reservoir, which has its own catchment in the Norwood tunnel area, needs to be investigated. If the drainage flows are found to be affected, the Canal & River Trust, which operates the eastern section of the Chesterfield Canal, will require that these are protected.

The land potentially required during construction includes the Broad Bridge Dyke. This watercourse is the feed for the operational Chesterfield Canal and reservoir spill from Harthill Reservoir. A suitably sized pipe/ culvert/bridge (similar to others on the feeder) will be needed to maintain the canal feed during construction. Any restoration scheme for this land needs to ensure that provision is made for the continued operation of this canal feeder channel and reservoir spill.

Some of the canal restoration achievements so far



Official opening of Tapton Lock, 1990



Official opening of Bluebank Lock, 1994



Official opening of Morse Lock, 1996



Rotherham section including Thorpe locks restored, 2003



First boat into Staveley Town Basin, 2012



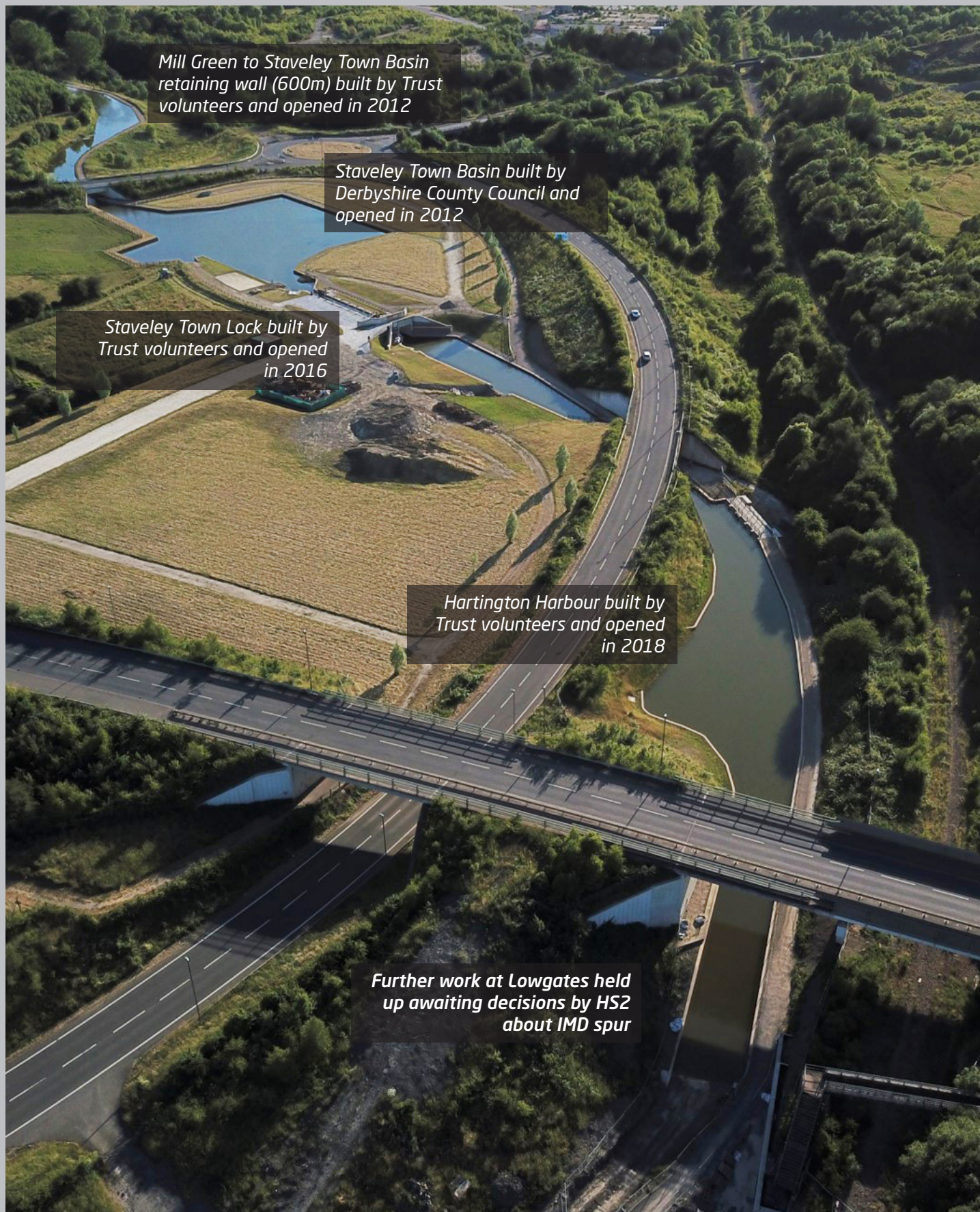
Official opening of Constitution Hill Bridge, 2014



Official opening of Staveley Town Lock, 2016



First boat into Hartington Harbour, 2018



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