

Phase 2a Combined Railhead/Maintenance Base Sift Cost Breakdown

The table below shows further details of the cost differences between the Proposed Scheme (Stone Infrastructure Maintenance Base-Rail (IMB-R) (Option A8) compared to the Aldersey's Rough alternative (Option A9.5*). It should be noted that costs are likely to change following further design development.

| Item | Proposed Scheme Option A8 (£ million) | Aldersey's Rough Option A9.5* (£ million) |
|--|---|---|
| Civil engineering (excluding earthworks) comprised of the following: | 49.3 | 38.0 |
| Stone maintenance base retaining walls | 1.7 | 0.0 |
| Whitmore Wood retaining wall | 10.2 | 12.8 |
| Filly Brook viaduct | 23.4 | 10.2 |
| Overbridges (B5026 Eccleshall Road & Whitmore Wood) | 4.1 | 2.5 |
| Underbridges (Yarnfield Lane HS2 Mainline) | 3.0 | 1.7 |
| Culverts (Dab Green drop inlet, Whitmore Wood & Madeley Park) | 0.5 | 0.8 |
| Road realignment (B5026 Eccleshall Road, Yarnfield Lane & Common Lane/Snape Hall Road works) | 4.1 | 3.3 |
| Demolition works | 0.2 | 0.7 |
| Boundary fencing | 1.1 | 2.2 |
| Track drainage | 0.0 | 2.6 |
| Balancing ponds | 1.0 | 1.2 |
| Depots & stabling (including earthworks) comprised of the following: | 79.5 | 77.1 |
| Earthworks | 34.1 | 47.4 |
| Overbridges (Yarnfield Lane over M6, Filly Brook West) | 6.5 | 0.0 |
| Underbridge (Yarnfield Lane under maintenance depot) | 3.0 | 0.0 |
| Bridge over Network Rail (Norton Bridge to Stone Railway) | 3.2 | 0.0 |
| M6 temporary & permanent slip roads at Stone | 7.3 | 5.1 |
| Maintenance depot & railhead buildings | 14.0 | 14.0 |

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|--|--------------|--------------|
| External & enabling works | 11.4 | 10.6 |
| Aldersey's Rough – Civils (increase against Proposed Scheme) comprised of the following: | | 33.0 |
| Retaining walls (Network Rail / HS2 dividing wall & flood defence wall) | | 5.6 |
| Overbridges (Manor Road South & Stoke to Market Drayton railway crossing) | | 2.8 |
| Underbridge (Farm access track under maintenance depot tracks) | | 5.7 |
| Culverts | | 1.6 |
| Civils structures railway possession costs | | 9.9 |
| Modifications to Keele motorway service area, including traffic management | | 7.4 |
| Aldersey's Rough – utility diversions, landscaping & planting (increase against Proposed Scheme) comprised of the following: | | 18.9 |
| Utility diversions | | 12.0 |
| Landscaping & planting | | 6.9 |
| Rail Systems comprised of the following: | 9.2 | 12.2 |
| HS2 track crossover, turnouts & connection | 3.0 | 5.2 |
| Network Rail track crossover, turnouts & connection | 5.8 | 5.5 |
| Maintenance depot – fixed diamond crossings | 0.4 | 1.5 |
| Indirect Costs | 22.8 | 29.6 |
| Sub-total: Construction & Indirect Costs: | 160.8 | 208.8 |
| Sub-total difference: | | -48.0 |
| Land & Property (increase against Proposed Scheme) | | 1.2 |
| Efficiency Adjustment | | -9.8 |
| Total Difference: | | 39.4 |
| Contingency (40%) | | 15.7 |
| Total cost difference from Proposed Scheme: | | 55.1 |

Notes:

- Paragraph 8.7.1 of the published Sift Report (November 2017) – Document R2(47) – reported the estimated cost for the civil engineering elements of the Aldersey's Rough Option as approximately £+38M compared to the Proposed Scheme (Stone). That additional sum results from the further civils, utility diversions and planting costs (at £33M and £18.9M respectively) that would be incurred in order to construct the Aldersey's Rough alternative and connect it to the existing railway and road network.
- "Proposed Scheme" refers to the Phase 2a hybrid Bill scheme as deposited in July 2017. These costs therefore do not reflect changes to the Proposed Scheme, as part of an Additional Provision (AP) deposited in March 2018, such as the replacement of the Filly Brook viaduct with the Norton Bridge to Stone Railway viaduct. The AP changes do not materially affect the costings shown in this schedule.
- Aldersey's Rough Option 9.5* assumes that additional maintenance loops at Pipe Ridware would not be required. Therefore no costs have been included in this costs comparison for such additional maintenance loops. Demolition costs for Aldersey's Rough Option 9.5* include the following structures on the out of use section of the Stoke to Market Drayton railway line: West Coast mainline overbridge, Manor Road overbridge, a farm access overbridge and a farm access underbridge.
- The additional boundary fencing costs for Aldersey's Rough Option 9.5* are due to an increase in the length of fencing required relative to Stone Option A8.
- The costs for additional track drainage for Aldersey's Rough Option 9.5* are due to an increase in the length of railway track relative to Stone Option A8.
- The additional earthworks costs for Aldersey's Rough Option 9.5* relative to Option A8 are due to the increase in volume and cost of the fill requirements at Aldersey Rough resulting from the difference in topography between Stone and Aldersey Rough.
- The costs for culverts at Aldersey's Rough Option 9.5* are an allowance for six new culverts.
- The civils structures railway possession costs for Aldersey's Rough Option 9.5* include track possessions associated with the installation of a new double track bridge deck over West Cost Mainline.
- Utility diversions for Aldersey's Rough Option 9.5* include an allowance for the diversion of one 132kv and three 11kv overhead lines.
- Landscaping, planting and utility diversion costs included in the hybrid Bill scheme at Stone would still be required for HS2 mainline works even if the railhead and maintenance depot were to be located at Aldersey's Rough and these are reflected in the table.
- Indirect Costs include HS2 corporate costs, project management, design development & insurances. They are calculated as a standard percentage increase which is applied across all project costs.
- The Efficiency Adjustment represents expected opportunity cost savings associated with the direct and indirect costs.

- Contingency (40%) is consistent with the Proposed Scheme and is applied to the Total Difference.
- All costs are stated at base date 1st Quarter 2015.
- Possession costs included in this schedule are limited only to those arising from the installation of a new double track bridge deck over West Coast Mainline. Substantial additional possessions would be required to install new track connections to West Coast Mainline for the Aldersey's Rough alternative maintenance base. The costs of these additional possessions would be significant – the compensation costs to train operators for West Coast Mainline possessions are estimated to be in the order of £10M.