

Name of meeting: CABINET
Date: 25 July 2017
Title of report: Proposed remedial works for ground stabilisation at A635 Holmfirth Road, Shepley

Purpose of report

For the Cabinet to consider the option for the proposed ground stabilisation at A635 Holmfirth Road, Shepley.

Key Decision - Is it likely to result in spending or saving £250k or more, or to have a significant effect on two or more electoral wards?	Yes
Key Decision - Is it in the Council's Forward Plan (key decisions and private reports?)	Key Decision - Yes Private Report/Private Appendix - No
The Decision - Is it eligible for call in by Scrutiny?	Yes
Date signed off by Strategic <u>Director</u> & name	Naz Parkar - 06.07.17
Is it also signed off by the Service Director for Finance, IT and Transactional Services	Debbie Hogg - 06.07.17
Is it also signed off by the Service Director (Legal Governance and Commissioning)?	Julie Muscroft - 06.07.17
Cabinet member portfolio	Cllr Musarrat Khan - Highways and Neighbourhoods

Electoral wards affected: Kirkburton
Ward councillors consulted: Cllr John Taylor, Cllr Richard Smith and Cllr Bill Armer
Public or private: Public

1. Summary

The A635 Holmfirth Road in Shepley is a major classified route linking the south of Kirklees with the M1 and neighbouring towns including Penistone, Barnsley and the City of Wakefield.

The A635 Holmfirth Road near its junction with Rowgate (see location plan) has been subject to an ongoing ground movement over the past 65 years. This has caused the highway and a substantial retaining wall that supports it to fail on several occasions leading to the partial closure of the road for many months, pending the implementation of interim/ semi-permanent remedial measures.

The proposed remedial works to mitigate the ground movements and stabilise the highway including its retaining structures are based on the outcome of extensive site investigation that has been undertaken to identify the underlying cause/s of the movement so as to devise an appropriate and effective remedial scheme to resolve the highway subsidence problem.

The current proposals include the construction of large bored reinforced concrete piles over the affected section (Approx 60m in length) to mitigate the ground movements and stabilise the highway and the substantial retaining wall supporting it. The works will be largely funded by additional funding secured through a successful Challenge Fund bid by Highways in 2015.

The proposed works can be constructed whilst maintaining a single lane shuttle working to minimise disruption to the local community and traffic.

2. Information required to take a decision

The A635 Holmfirth Road is a principal route that links the south of Kirklees with the M1 and neighbouring towns including Penistone, Barnsley and the city of Wakefield.

The affected section of A635 Holmfirth Road near its junction with Rowgate and the retaining wall that supports it, has been subject to periodic remedial measures due to subsidence and partial failure over the past 65 years. Various engineering interventions have been implemented to address the ongoing ground movements which manifest itself as significant settlement in the highway and the retaining wall, together with the development of deep longitudinal cracks in the road surface, but these have largely failed to address the underlying root of the problem. A comprehensive ground investigation recently completed at this site has now established the presence of a deep slip plane below the highway, which often becomes mobilised following a sustained heavy down pour and is now considered to be the underlying mechanism behind the ongoing ground movement.

Due to the ongoing ground movements if a suitable remedial scheme is not implemented, the highway and the supporting retaining wall will continue to be undermined and in the event of a full failure the A635 Holmfirth Road will have to be fully closed to vehicular traffic at this location, with most of the affected traffic including commercial vehicles and HGV's having to be diverted to an alternative suitable diversion route via Huddersfield, which is over 16 miles long. This will have a major impact on the local community and businesses using this route whilst the road remains closed pending the implementation of appropriate remedial works.

With this in mind, this section of highway and its retaining wall were included in a Joint Highway Structures Challenge Fund bid with Bradford City Council, which was submitted to the DfT. to secure the necessary significant funding required to address the

aforementioned problems at this site. Following the successful outcome of the bid in 2015, monies to undertake the necessary detailed ground investigation to establish the underlying cause/s so as to devise an appropriate and effective remedial ground stabilisation scheme to mitigate the subsidence in the highway were secured and ring fenced.

The current proposed remedial works which are now based on the outcome and the recommendations of a detailed site investigation recently completed at this site, are based on intercepting the deep slip plane using large bored reinforced concrete contiguous piles designed to mitigate the underlying ground movements and thereby stabilise the highway and the retaining wall located within the affected length.

The new proposal comprising the pile construction and the associated remedial works can be implemented without the need for a road closure by maintaining a single lane shuttle working controlled by traffic lights together with the provision of a safe walkway for pedestrians at all times.

The proposed works can commence in late September 2017 and is anticipated to take approximately 12 weeks to complete.

The proposed remedial works is estimated at around £540k to implement and is largely provided for through the Challenge Fund secured from the Department for Transport. The Council will also be making a £89k contribution representing a 16.45% of the works costs, a condition imposed by the DfT for awarding the grant, which is provided for in the 17/18 Highways Capital Plan.

Approval is sought to implement the proposed remedial works as detailed.

3. Implications for the Council

3.1 Early Intervention and Prevention (EIP)

Through the proactive implementation of the proposed works, further subsidence in the highway, which could lead to its full closure for a lengthy period, with obvious implications for the local community and the economy, can be avoided.

3.2 Economic Resilience (ER)

The A635 Holmfirth Road is a principal route that links the south of Kirklees with M1 and the neighbouring towns of Penistone, Barnsley and the City of Wakefield. The closure of this road would lead to significant disruption to the local and regional traffic due to the need for the diversion of most vehicles including commercial vehicles and HGV's to an alternative lengthy diversion route of over 16 miles.

3.3 Improving outcomes for Children

None

3.4 Reducing demand of services

The proposed stabilisation scheme will mitigate the ground movements and will avoid the need for the implementation of periodic and costly interim remedial measures necessitated by the partial failure of highway and the retaining wall, which have been occurring at this location over the past 65 years.

4. Consultees and their opinions

Cllr John Taylor has been aware of the ongoing problems at this location for a number of years and is very appreciative of the proposed actions to address the underlying issues. He agrees that any partial collapse of the retaining wall and the likely closure of the road for a prolonged period will cause significant traffic disruption and also impact on local businesses and residents. He is fully supportive of the proposals.

Cllr Richard Smith has commented that he is a regular user of this route which links south Huddersfield/Holme Valley to the M1 and that he supports the proposals.

Cllr Bill Armer has commented that he is in favour of this necessary pre-emptive work.

5. Next steps

Procurement of the proposed remedial works by early September 2017 and the commencement of the works soon after subject to the cabinet approval.

6. Officer recommendations and reasons

Officers consider that proactive implementation of the proposed piling works will mitigate the underlying ground movements at this location and will avoid further periodic interim maintenance costs due to subsidence at this site.

The monies specifically secured and ring fenced through the successful Highway Structures Challenge Fund bid for this scheme must be utilised by the end of March 2018, beyond which time the funding will no longer be available to the authority.

7. Cabinet portfolio holder's recommendations

Cllr Musarrat Khan expressed her appreciation for obtaining the necessary investment, provided for through the Challenge Fund, secured from the Department for Transport and was in agreement for the works to commence September 2017, subject to Cabinet approval.

8. Contact officer

Contact Officer: Farhad Khatibi/Michael Salvanos
Direct Dial 01484 221000 (74199 / 76890)

farhad.khatibi@kirklees.gov.uk

michael.salvanos@kirklees.gov.uk

9. Background Papers and History of Decisions

See below for a brief history of the subsidence issues at this location:

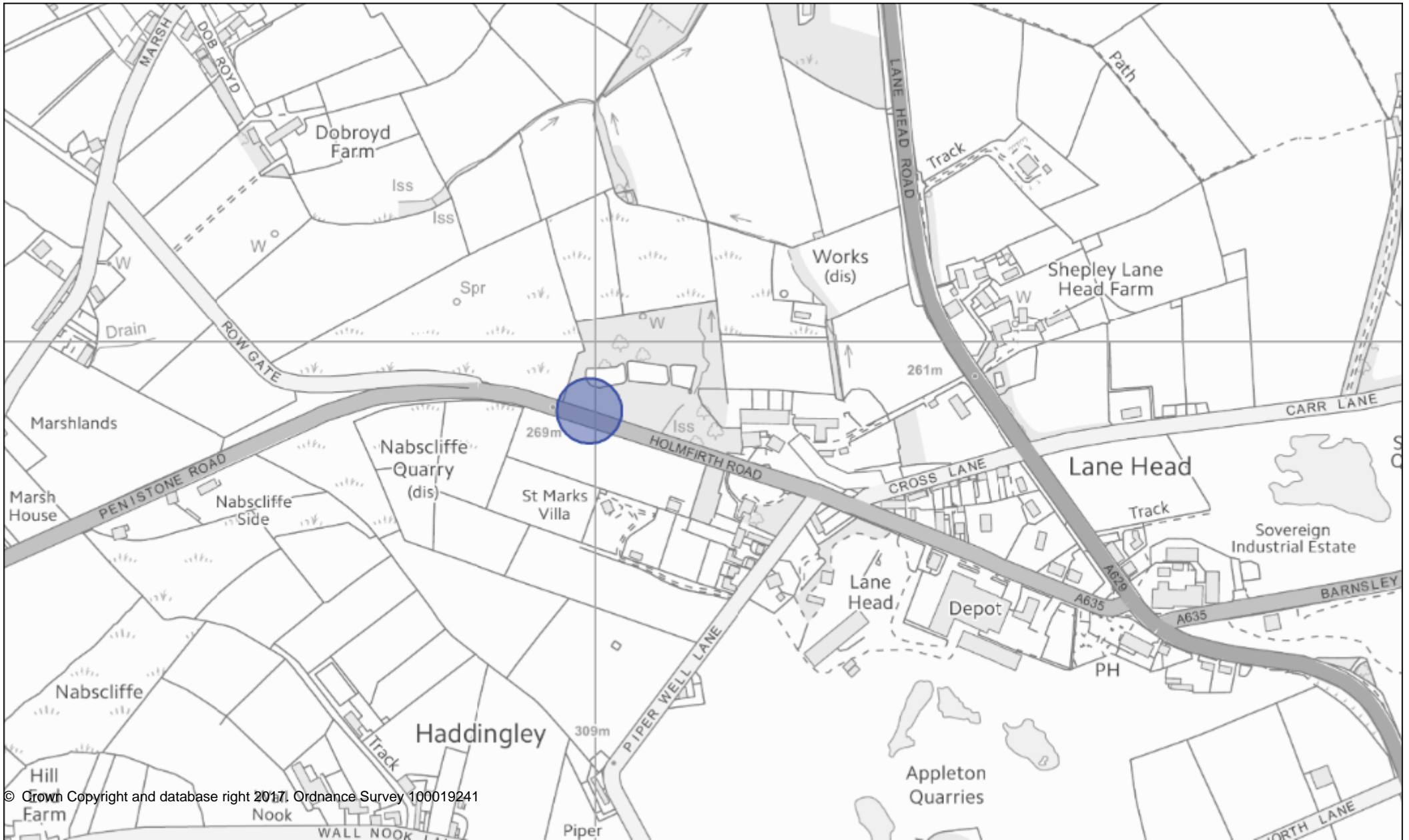
- 1952 - Section of retaining wall in the area was reconstructed following land slip.
- 1960 - Subsidence causing damage to road and subsequent repairs.
- 1976 - Settlement of eastbound carriageway and movement of retaining wall causing lane closure and repairs.
- 1985 - Installation of reinforced concrete slab to solve subsidence issues.
- 2001 - Full failure of concrete slab causing lane closures.
- 2002 - Reconstruction of adjacent section, remaining 65m noted to be in poor condition.

- 2003 - Installation of gabion baskets to attempt to solve subsidence issues.
- Post - 2003 – Ongoing subsidence causing damage to the highway requiring regular repairs.

10. **Service Director responsible**

Joanne Bartholomew - Service Director - Commercial, Regulatory and Operational Services

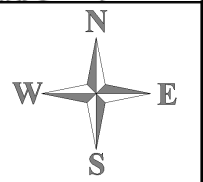
joanne.bartholomew@kirklees.gov.uk



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A635 Holmfirth Road, Shepley,
Location Plan



Scale = 1 : 5000