
A67 CARLBURY BANKS LANDSLIP

Responsible Cabinet Member - Councillor David Lyonette, Transport Portfolio

Responsible Director - Richard Alty, Director of Place
Paul Wildsmith, Director of Resources

SUMMARY REPORT

Purpose of the Report

1. The purpose of this report is to seek Council approval to agree to allocate funding to undertake repairs to the A67 Carlbury Banks Landslip. This decision is subject to Cabinet confirming the decision taken under delegated authority to submit the application to the Department for Transport Pinch Point Fund; and it being successful.

Summary

2. The Council has been managing a landslip on the A67 since February 2013 and has commissioned detailed investigation and feasibility work to develop an understanding of the problem and potential solutions. This study was concluded in September 2013.
3. On the 27 September 2013 the Secretary of State announced that a further £80m was being made available for a further two tranches of the Department for Transport Local Pinch Point Fund (Tranches 3 and 4).
4. Tranche 3 funding was allocated to 15 schemes which had previously been submitted to the Department.
5. The remaining £55m was available on a competitive basis and will make up Tranche 4 of the Local Pinch Point Fund. This approach was to enable any new schemes to come forward and for bids that have previously been submitted (but have been unsuccessful to date) to be strengthened and resubmitted.
6. Fortuitously the feasibility work had reached conclusion when the unexpected further tranches of the DfT funding were announced. The deadline for bids was 31 October 2013, which set an extremely tight timescale to consider and formulate a new application for the landslip project.
7. The feasibility had identified a worse situation than the two landslips that are currently affecting the road. There is a 387m section of bankside classed as

unstable. The geotechnical experts assessed a range of options to solve the problem with a number of options viable. For the purposes of the funding criteria, spend time limits and value for money a soil nailing solution is considered the preferred option. This involves installing a grid of long anchors into the slope and under the road to stabilise the embankment. The total project costs being £3,919,617.

8. Under the Scheme of Delegation to Officers, the authorised officer may submit bids for funding to the relevant body where the deadline occurs prior to the next meeting of Cabinet. Given the timescale to submit applications the Director of Resources exercised these powers in consultation with the Leader and Portfolio Holder for Transport. The confirmation of this decision is subject to a separate Cabinet report.
9. The minimum match funding requirement was set by the DfT at 30%, which equates to an £878k contribution from the Council. Northumbrian Water Limited who is a partner in the application has agreed to contribute 60% towards their element of the project.
10. There has been no provision for this project within the Medium Term Financial Plan (MTFP) given the landslip was an unexpected event and work has been ongoing to identify the problem and solutions. Council are asked to approve a capital allocation of £878k for the match contribution to the A67 Carlbury Banks Land Slip project, funded by prudential borrowing. This decision is subject to Cabinet confirming the decision taken under delegated authority to submit the application to the Department for Transport Pinch Point Fund; and it being successful.
11. The Council needed to react quickly and commissioned a range of interventions that incurred costs. There has been no provision for this project within the Medium Term Financial Plan (MTFP) given the landslip was an unexpected event. The cost of these interventions is £275k and Council is requested to approve this funding. The funding guidance did not allow these costs to be included within the application.
12. A summary of the benefits that have been included in the application are included at **Appendix 1**.
13. The application provides the best opportunity to secure significant contributions towards the solution costs and thus restoring transport certainty to the A67.

Recommendation

14. It is recommended that Council approves:-

(a) Capital funding of £275k to cover costs incurred in responding to this event.

And;

(b) subject to Cabinet agreeing to progress the scheme and the application to the Department for Transport Pinch Point Fund being successful, Council approve

a capital allocation of £878k for the match funding contribution to the A67 Carlbury Banks Land Slip project.

Reasons

15. To secure funding to stabilise the embankment and restore transport certainty along the A67.

Richard Alty, Director of Place
Paul Wildsmith, Director of Resources

Background Papers

A67 Carlbury Banks Landslip – Ground investigation and Options Appraisal Report. (Halcrow)

DW : Extension 2752
LC

S17 Crime and Disorder	There are no direct implications.
Health and Well Being	The scheme has positive benefits for those people accessing health and other wellbeing services.
Carbon Impact	In safeguarding the A67 route, the proposed scheme maintains the most direct highway route linking Darlington and Teesdale. Diversionary routes required on closure of the A67 at Carlbury are calculated to generate an extra 2,038 tonnes of CO ₂ from vehicle emissions per year.
Diversity	Delivery of the scheme would benefit all residents using this section of the A67 and would have significant benefits for residents within protected characteristic groups, including young people, older people and people living with a disability.
Wards Affected	The landslip is within the Heighington and Coniscliffe Ward but the strategic value of the A67 impacts on all wards in the Borough.
Groups Affected	All
Budget and Policy Framework	This decision does represent a change to the budget framework.
Key Decision	This is not a key decision it is a decision of Council.
Urgent Decision	This is not an urgent decision.
One Darlington: Perfectly Placed	The application supports the delivery of 'Perfectly Placed'. Darlington is the Gateway to the Tees Valley and Barnard Castle is the

	Gateway to Teesdale, with the A67 as main transport route between these sub-regions. The proposed scheme fully restores the A67 and thus the transport connectivity. The scheme removes the current constriction on the local strategic road network and provides increased certainty to local businesses, residents and all road-users. The scheme will sustain and encourage economic growth by protecting existing businesses, maintaining access to jobs and education.
Efficiency	The submission of the application presents the Council with the best opportunity to stabilise the embankment with a significant proportion of the costs funded from the Department for Transport. i.e. delivery of a £3,917,617 scheme for a Council contribution of £878,000.

MAIN REPORT

Information and Analysis

16. In February 2013 a landslip was identified on the southern (westbound) verge of the A67 single carriageway road. The embankment dropped 200mm with a 1m deep visible crack alongside the road. The embankment is a steep 1 in 1 gradient of around 12m in height, on top of a 5m vertical cliff face. The immediate response was to introduce traffic management to move traffic loading away from the road edge and the steep, high embankment. Minor remedial work was undertaken and investigations and monitoring started.
17. Northumbrian Water Limited (NWL) mains were identified as part of the initial investigations and they have worked in partnership with the Council since the slip was identified.
18. Following a further 380mm movement in March 2013, the impact on the road and water mains was becoming an increasing risk. It was decided to close the road and NWL commenced a process of reducing the flows within the mains and diverting flows around their network to reduce the risk if the bank movement caused the mains to fail. In April 2013 further investigations identified a new slip location next to the original location.
19. Following ground investigation and geotechnical modelling by the appointed geotechnical specialists, Halcrow, the road re-opened to traffic with temporary traffic signals and a 30mph speed limit on 16 July 2013, with the bus service resuming its usual route on 28 July. Reduced operational flows in the water mains remain and monitoring is ongoing numerous times per week. The road could be closed at any time if monitoring identifies road deformation or movement, particularly at times of high rainfall.

20. Detailed ground investigations have been completed and an options appraisal report has been completed by Halcrow. The study has identified that the area affected is much wider than the two active landslips that are impacting on the road. A 387m section of the A67 has been classed as very unstable by geotechnical experts. This is much worse than the original two localised landslips. The failures are occurring due to the slope having been over steepened, in the past, when the course of the river lay at the foot of the cliff. This would have gradually eroded the rock cliff, causing the upper soil slopes to be over steepened with time. The slope is now trying to achieve its natural angle of repose by a series of small scale slips that are now starting to impact on the road and water mains.
21. On 27 September 2013 the Secretary of State unexpectedly announced that a further £80m was made available for a further two tranches of the Fund (Tranches 3 and 4). Tranche 3 funding has been allocated to 15 schemes which have previously been submitted to the Department. The remaining £55m is available on a competitive basis and will make up Tranche 4 of the Local Pinch Point Fund. The approach was to enable any new schemes to come forward and for bids that have previously been submitted (but have been unsuccessful to date) to be strengthened and resubmitted. The deadline for bids was 31 October 2013. The minimum match funding requirement was set a 30% contribution.
22. The competition for the £55m fund is likely to be extremely intense with over 150 applications nationally submitted in the previous tranches. Most of which will be resubmitted and will have been strengthened.

Consideration by Cabinet

23. Under the Scheme of Delegation to Officers the authorised officer may submit bids for funding to the relevant body where the deadline occurs prior to the next meeting of Cabinet. Given the timescale given to submit bids the Director of Resources exercised these powers in consultation with the Leader and Portfolio Holder for Transport. Cabinet are considering this on 3 December 2013 therefore the recommendations in this report are subject to their approval to confirm the submission of the application and the application being successful.
24. An application was submitted on 31 October 2013. The minimum match funding requirement was set by the DfT at a 30% contribution, which equates to a £878k contribution from the Council. The approval of funding is a Council decision and covered in the financial implications section of this report.

Options

25. There are three options summarised below:-

Do nothing

26. This would involve removing the existing temporary traffic management and re-opening the road to all traffic. Given the two active landslides are already starting to impact on the closed traffic lane; additional loading could accelerate the failure.

The Council therefore cannot place the public at risk by allowing both lanes to be used. This is not considered an acceptable option.

Do minimum

27. This is the present scenario of traffic lights, reduced speed limit and the re-distribution of water supply, underpinned by regular monitoring of the embankment. The risk and impact is reduced but the problem is not solved. The length of traffic lights may need extending or the road could be closed at any time if monitoring identifies road deformation or movement, particularly at times of high rainfall. The Council and NWL are currently implementing this option.
28. The Do-minimum option is not without ongoing costs. The monitoring regime is time consuming for existing staff, which means other projects are not being delivered. The estimated ongoing monitoring costs are in the region of £17k per year in terms of staff time and transport costs.
29. The present traffic signal situation is a temporary one with equipment hired and maintained by a traffic management company at an ongoing cost. If this option is to be extended in time then consideration will need to be given to a more permanent solution. The cost of installing permanent traffic signals and other remedial works is estimated in the region of £260k. This option is only feasible with the ongoing support from NWL to keep their main at current pressures. This position will need to be reviewed after the outcome of the current funding application is known.

Do Something

30. A full options investigation and appraisal has been undertaken by Halcrow. The options considered are listed below with a summary of their viability:-

Option	Techniques/Options	Viability
1	Soil Nail strengthening works	Viable option.
2	Bored pile wall strengthening works.	Viable option.
3	Diversion of the road	Viable option.
4	Rock ribs.	Not possible insufficient space.
5	Granular fill replacement.	Not possible insufficient space.
6	Drainage	Improvements recommended as a supplementary feature.
7	Sheet pile strengthening works	Not considered suitable
8	Gravity structure	Construction problematic, not feasible.
9	Cantilevered roadway	Significant construction period, cost prohibitive.
10	Multiple row sheet pile strengthening works.	Not considered suitable
11	Do minimum	An option but relies on on-going monitoring and risk of closure.

31. Options 1, 2 and 3 are options that are considered as possible solution options, each having various positive and negative attributes.

32. In terms of the funding opportunity presented by the Department for Transport Pinch Point Fund, Option 3 – the Diversion of the Road option has been discounted. A condition of the funding is that the DfT element must be spent by April 2015. A new road project would not be deliverable within that timescale. A project of this nature would need several years to be developed. The costs are not as developed for this option. However, initial estimates suggest it would be in excess of £5m.
33. Options 1 and 2 are deliverable within the funding timescale with soil nailing a quicker technique, which will potentially have benefits in terms of minimising disruption, which has been a significant issue for those impacted by road closures.
34. The bored pile solution would involve the construction of a vertical concrete wall with the piles having to be constructed to a depth of approximately 12m. With the piles each having a diameter of 500mm, this would mean boring a minimum of 774 piles.
35. The soil nail solution involves installing a 2m x 2m grid pattern of soil nails approximately 7m long into the slope and under the road to stabilise the embankment.
36. Both options include improvements to drainage and the introduction of a vehicle restraint system.
37. The project costs are an important factor for the Department for Transport in assessing the economic case to support the project. The bored pile wall and soil nailing solutions were developed as part of the development of the application.
38. The soil nailing solution total scheme cost is £3,917,617. This requires securing a contribution of £2.445M from the national £55m DfT fund i.e. 4% of the total national fund. Given the scale of the competition nationally this is a relatively large proportion of the total fund. The whole life costing shows the bored pile wall solution costing significantly more at £6,794,701, which is a much larger proportion of the national fund (8%). The economic and strategic case would need to be extremely strong to secure this amount of funding, especially when an acceptable alternative solution is much more cost effective.
39. The soil nailing option requires an £878k match funding requirement from the Council, which is not an insignificant amount of funding to find given the current financial position of the Council. The match required for the bored pile option would be £1,740,643, nearly double the amount for soil nailing and extremely difficult to find.
40. In terms of value for money, potential for less transport impact, the soil nailing solution is the most cost effective option and as such provides the Council with the best opportunity to secure a successful application, in extremely intense competition for funding. A strong strategic and economic case has been put forward in the application with the benefits summarised at **Appendix 1**.

41. The land to the south of the road has been designated as ancient semi-natural woodland. The land adjacent to the site is under an environmental stewardship scheme. The design of the scheme has been developed working closely with DBC's ecology team to ensure there is no net negative impact on biodiversity and landscape in the long term. The scheme will require removal of ancient semi-natural woodland, which will be mitigated for on-site with best practice reinstatement of species rich meadow land over the embankment and offsetting for loss of trees with a significant replanting programme to ensure the area of woodland is not diminished. The wildflower meadow reinstatement represents a habitat which is increasingly rare and could re-establish in the short term, helping to minimise the duration of impact. Over time as the offsetting planting matures, it will leave a net benefit in terms of amenity value, habitat and landscape character. Other ecological surveys have taken place and strategies are in place to ensure that wildlife is protected.
42. Given the scale of the project, finding the whole of the funding from Council resources would prove extremely difficult and as such if the application is not successful the current scenario may have to continue i.e. temporary traffic signals and 30mph speed limit. This presents the Council with an on-going worsening risk that if the road slips further the solution could involve significantly greater costs. This position will need to be reviewed after the outcome of the current funding application is known.
43. The submission of the application presents the Council with the best financial opportunity to stabilise the embankment with a significant proportion of the costs funded from the Department for Transport. This is likely to be the last opportunity to bid into Department for Transport funding given future funding will be included in Strategic Economic Plans controlled by Local Enterprise Partnerships.

Financial Implications

44. The total project cost included in the application is £3,919,617, which is made up of the following :

Department for Transport	£2,445k
Darlington Borough Council	£878k (30% of the stabilisation works)
Northumbrian Water Limited (NWL)	£596k (60% of the NWL Works)

45. The minimum DfT match requirement was set at 30%.
46. Northumbrian Water Limited have been very supportive and a willing partner from the outset. Any works to stabilise the bank will require works to their mains to enable the works to be undertaken at reduced risk. NWL have agreed to provide a fixed cost for their works and agreed to fund 60% of the costs.
47. The increased match funding from NWL has raised the total match in the application to 37% of the total project costs, which is above the minimum set by the DfT and increases the strength of the application.

48. As part of the application a strong strategic and economic case was put forward. The economic case was assessed based on actual traffic data. The Value of Time (VoT) and Carbon Savings were calculated based on a comparison with the most likely scenarios i.e. closure of the A67 and one way working with traffic signals. If the A67 is closed the additional VoT and carbon cost is calculated at £4.554M per year. If the one way working with traffic signals is maintained the additional VoT and carbon cost is calculated at £1.157M per year. Delivering the scheme will save a minimum of £1.157M per year.
49. With a total scheme cost of £3,917,617 (DfT contribution £2.445M, Local and third party match of 37%) and design life of 60 years the proposed scheme demonstrates excellent value for money.
50. There has been no provision for this project within the MTFP as the landslip was an unexpected event and work has been on-going to identify the problem and solutions. Given the opportunity that has arisen to secure a significant financial contribution from both the DfT and the partnership contribution from NWL, approval is sought for capital spending of £878k. The funding will be met from either under spends on existing schemes, capital receipts or prudential borrowing with any revenue implications built into the MTFP.
51. The Council needed to react quickly and commissioned ground investigation, temporary bus services and had to undertake significant repairs to the surrounding network arising from the extraordinary levels of traffic using roads not suitable to take 'A' road traffic volumes. There has been no provision for this project within the MTFP given the landslip was an unexpected event. The cost of these interventions is £275k. The funding guidance did not allow these costs to be included within the application.
52. The approval of this funding presents the Council with the best opportunity to stabilise the embankment with a significant proportion of the costs funded from the Department for Transport i.e. delivery of a £3,917,617 scheme for a Council contribution of £878,000.

Procurement Advice

53. Due to the specialist nature of the works and value of the project, a standalone tender will be carried out to ensure the best value tender is achieved. The timescales for this have been built into the application programme. This route will ensure the contractors with the required specialist expertise and capability will have an opportunity to tender for the work.
54. Various contract scenarios have been considered as part of the risk management process. The option being proposed for the main engineering works would be a contractor led design and build package using the New Engineering Contract (NEC) 3rd Edition Option A. This form of contract is a priced contract with activity schedule, which will transfer the vast majority of risk to the contractor. The design liability and risk would rest with the contractor meaning all associated risks would be transferred away from DBC. This will in addition mean there is no potential for dispute as to where liability lies between design and construction as the contractor will have overall responsibility.

55. The works would be managed by DBC's dedicated capital projects team which has significant experience of delivering projects of this size and complexity to meet onerous quality, cost and programme requirements.
56. As part of on-going partnership working to manage the impacts of the landslip an agreement has been entered into with NWL, whereby they have agreed to cap costs for the utility works and a fixed price has been included the application meaning any cost overrun for their element will be borne by NWL, further managing risk to DBC.

Equalities Considerations

57. An Equality Analysis has been undertaken in line with the Equality Duty. Delivery of the scheme would benefit all residents using this section of the A67 and would have significant benefits for residents within protected characteristic groups, including young people older people and people living with a disability. This includes Commuters, School children and College students travelling from/to Barnard Castle, villages and rural communities west of Darlington Borough including:
- (a) The 2220 commuters travelling into Darlington from Durham County each day (A67 is one of three A' class roads linking Durham County and Darlington Centre).
 - (b) School students travelling to/from High Coniscliffe Primary School, Carmel College (Roman Catholic Secondary school and sixth form), Queen Elizabeth Sixth Form College, Darlington College.
 - (c) Bus passengers using Services 75 and 76 (to/from Barnard Castle).
 - (d) Inpatients, outpatients and family and friends accessing health service facilities in Darlington and in Barnard Castle.
 - (e) The Memorial hospital provides inpatient and outpatient services for rural areas to the West of Darlington, including Barnard Castle and the Durham Dales. With the A67 the most direct route. Darlington Memorial hospital is also the nearest A&E department to Barnard Castle and the Durham Dales.

Consultation

58. Unlike a scheme in the development stages the circumstances that the landslip presented had an immediate impact on stakeholders. The Council used recognised Civil Contingency Protocols to manage the situation and understand the impacts. Two groups were formed to manage this:-
- (a) A technical group was formed to focus on the technical investigation, mitigation and solutions.
 - (b) A support group was formed to understand the implications, communicate and provide support and assistance.
59. The present scenario of uncertainty regarding the potential for long term closure and traffic management does not provide confidence or certainty for residents or businesses. The failure of the existing transport infrastructure is inhibiting new

business growth and affecting existing businesses that are trying to compete in the current difficult economic climate.

60. The stakeholder management has involved significant effort to ensure communities and partners are aware of the complexities. There has been pressure to resolve this quickly and to permanently restore transport certainty. The communities and business affected have made their campaigns and support known through the local media, MPs, Local Councillors, Parish Councillors and direct to the Council.
61. The application provides the best opportunity to secure significant contributions towards the solution costs and thus restoring transport certainty.

Benefits

The following points have been drawn from the application to highlight the strengths of the scheme and positive impact it will have:-

- Darlington is the Gateway to the Tees Valley and Barnard Castle is the Gateway to Teesdale, with the A67 as main transport route between these sub-regions. The proposed scheme fully restores the A67 and thus the transport connectivity.
- The benefits of the scheme would be realised immediately since it will remove the current constriction on the local strategic road network and provide increased certainty to local businesses, residents and all road-users.
- The economic case shows likely benefits of £4.554M in the first year after completion. With a total scheme cost of £3,917,617 (DfT contribution £2.445M, Local and third party match of 37%) and an expected life span of 60 years the proposed scheme demonstrates excellent Value for Money.
- The scheme will sustain economic growth by protecting existing businesses, maintaining access to jobs and education.
- The scheme will also remove the potential for severance of communities from services; providing a direct route for emergency vehicles (A&E hospital) and ensure that local people can access services such as schools, leisure, tourism, employment etc.
- The scheme proposed encapsulates the strategic direction set out in 'DfT - Transport an Engine for Growth' – "We need Good Transport – to make our economy stronger and our lives easier" – the present scenario of a failing transport infrastructure is contrary to this direction of travel.

Other benefits include:

- Fully restoring access on the main route linking Darlington to Barnard Castle and Teesdale to make the economy stronger and lives easier.
- Benefits to resilience of NWL water supply across Darlington and the wider Tees Valley.
- Reducing travel time for more than 8,600 vehicles per day. Improved journey reliability.
- Benefits to the local economy as the A67 is an important route for commuters and businesses.
- Social benefits, in particular for people accessing health and education services.
- Increased resilience of the highway network, providing an alternative east –west route to the A66.
- Ensuring that the Highways Agency has a strategic diversion route in line with our Network Management duty;
- Safeguarding existing jobs and introducing certainty to encourage growth.
- Protecting local businesses, in particular those along the A67 itself.
- Support Tourism links and destinations.
- Support the Rural Economy.