

## **Crannaford Level Crossing Highway Reprofiting**

Report of the Head of Planning, Transportation and Environment

***Please note that the following recommendation is subject to consideration and determination by the Committee before taking effect.***

**Recommendation:** It is recommended that the scheme shown on plan B23000366-0102 included in Appendix II is approved for detailed design and construction at an estimated cost of £250,000.

### **1. Introduction**

This report seeks approval for some highway works on Crannaford Lane on the northern approach to the Half-Barrier Level Crossing on the Exeter to Waterloo mainline so as to reduce the danger of heavy goods vehicles grounding. This is something that Network Rail has requested is addressed as part of the consented Cranbrook New Community development. Section 106 funding has been secured as part of the Cranbrook development to deliver the improvements.

### **2. Background**

Crannaford Lane is a rural, unclassified road providing one of the few vehicular crossings of the Exeter to Waterloo mainline between Exeter and Whimple (see Appendix I). Traffic levels on the road are very low, with counts from April 2015 indicating approximately 430 vehicles two-way, including 62 HGV movements crossing the rail line daily. There is limited vehicular and negligible pedestrian demand (both existing and forecast) for travel between the B3174 (previously the old A30) and Broadclyst via Crannaford Lane, with the main traffic movements associated with the Town and Country Supplies store just north of the crossing.

As part of the Cranbrook development, Crannaford Lane was realigned to form a minor arm at a priority junction with the east-west Main Local Route that passes through Cranbrook. Owners of the Town and Country Supplies store have previously identified the difficulties for HGVs accessing their site. Firstly, all HGVs must travel to/from the site from the south due to the tight entrance turning radius, preventing large vehicles accessing the store from the north and secondly, larger vehicles have difficulties on the steep, northbound approach to the level crossing, particularly during winter months. Network Rail has also identified the grounding of vehicles on the half-barrier level crossing as a safety risk - at a 2015 meeting with the Cranbrook New Community Partners and Devon County Council, Network Rail sought that the re-profiling works be progressed.

### **3. Proposal**

The proposed scheme includes changes to the vertical alignment of the public highway on the northbound approach to Crannaford Level Crossing with the intention of reducing the danger of grounding on the crossing. The scheme is shown in Appendix II. The longitudinal and cross section drawings in Appendix III provide a clear demonstration of how the proposals allow a smoother transition for vehicles crossing the level crossing, compared to the existing alignment of the road.

Given the potential land take on the Cranbrook Education Campus land, a reinforced concrete cantilever retaining wall is the landowner's preferred option on the eastern side of the road and has been designed to accommodate abnormal load traffic and pedestrian loading from a timber post and rail fence. On the western side of the road, the landowner has expressed a preference for an embankment, which has been accommodated in the design.

To reduce the impact on the level crossing apparatus and the stability of the railway, the proposed road level within 9.4m of the crossing could be achieved by raising ground levels, without a retaining wall, which would reduce the need for deep excavations in this vicinity.

The scheme has been designed with consideration to the Design Manual for Roads and Bridges' *TD 9/93 Road Geometry*. The Office of Rail Regulation's *Level Crossings: A Guide for Managers, Designers and Operators* provides design guidance on similar roads that have a daily vehicle usage of less than 2,000 vehicles. The design is considered suitable and is expected to reduce the likelihood of articulated vehicles grounding.

Detailed design is expected to take 4 months and then will be subject to gaining the necessary Network Rail/environmental approvals. The programming of this is outside our control. Construction is expected to take approximately 4 months.

#### **4. Options/Alternatives**

There are limited alternatives that would address the issue of grounding vehicles. Feasibility options were considered and costed for an embankment solution on both sides of the road and for a retaining wall on both sides of the road. Retaining walls reduces the land take; however represents a more costly solution. The loss of land on the Cranbrook Education Campus side of the road was a constraint and resulted in the hybrid design, which best satisfied both landowners' needs.

Doing nothing would not address concerns raised by both Network Rail and the business owner north of the level crossing.

#### **5. Consultations/Representations**

Meetings have been held with Network Rail and other adjacent landowners who have all indicated in principle support for the scheme. Discussions with the Town and Country Supplies business, just north of the level crossing, previously highlighted the difficulties with the gradient on the northbound approach to the level crossing, which causes problems for HGV deliveries, particularly during winter months. The proposed changes are expected to improve conditions.

#### **6. Financial Considerations**

A Section 106 contribution of £275,000 has been secured from the Cranbrook New Community Partners towards raising the vertical alignment of the public highway on the northbound approach to the Crannaford Level Crossing. The scheme will therefore be fully funded using developer contributions including any Network Rail fees.

## **7. Environmental Impact Considerations**

An ecology investigation has concluded that the overall impact on the ecological resource present is likely to be neutral at the local level. It does however stipulate that due to potential for nesting birds, dormice and reptiles, vegetation clearance should be undertaken with the supervision of an ecologist. A mitigation licence will be required from Natural England in respect of any potential disturbance to protected species.

## **8. Equality Considerations**

Where relevant to the decision, the Equality Act 2010 Public Sector Equality Duty requires decision makers to give due regard to the need to:

- eliminate discrimination, harassment, victimisation and any other prohibited conduct;
- advance equality by encouraging participation, removing disadvantage, taking account of disabilities and meeting people's needs; and
- foster good relations between people by tackling prejudice and promoting understanding.

taking account of age, disability, race/ethnicity (includes Gypsies and Travellers), gender and gender identity, religion and belief, sexual orientation, pregnant women/new and breastfeeding mothers, marriage/civil partnership status in coming to a decision, a decision maker may also consider other relevant factors such as caring responsibilities, rural isolation or socio-economic disadvantage.

The type of works being proposed are expected to have a neutral impact on the nine protected characteristic groups.

## **9. Legal Considerations**

There are no specific legal considerations associated with this scheme.

## **10. Risk Management Considerations**

Discussions have been held with landowners to gain 'in principle' acceptability of the scheme. Highway and structural works at the northern extent of the scheme will be undertaken at night due to the close proximity of the railway. In order to ensure the works do not destabilise the rail line, supervision fees have allowed for the cost of a surveyor for 2 weeks during the works that take place closest to the railway line.

The scheme is not adding to the drainage catchment area, therefore no allowance is considered necessary. Ecological mitigation is described in section 7 and no works will be required to raise the BT underground cables, which run along the road.

## **11. Summary/Conclusions/Reasons for Recommendations**

The proposed reprofiling of Crannaford Lane on the northbound approach to the Exeter to Waterloo mainline half-barrier level crossing reduces the risk of large vehicles grounding at the level crossing. The scheme is supported in principle by adjacent landowners and will be fully funded by the New Community Partners as part of the consented Cranbrook development.

Dave Black  
Head of Planning, Transportation and Environment

**Electoral Division: Broadclyst & Whimble**

Local Government Act 1972: List of Background Papers

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Background Paper	Date	File Ref.
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Nil

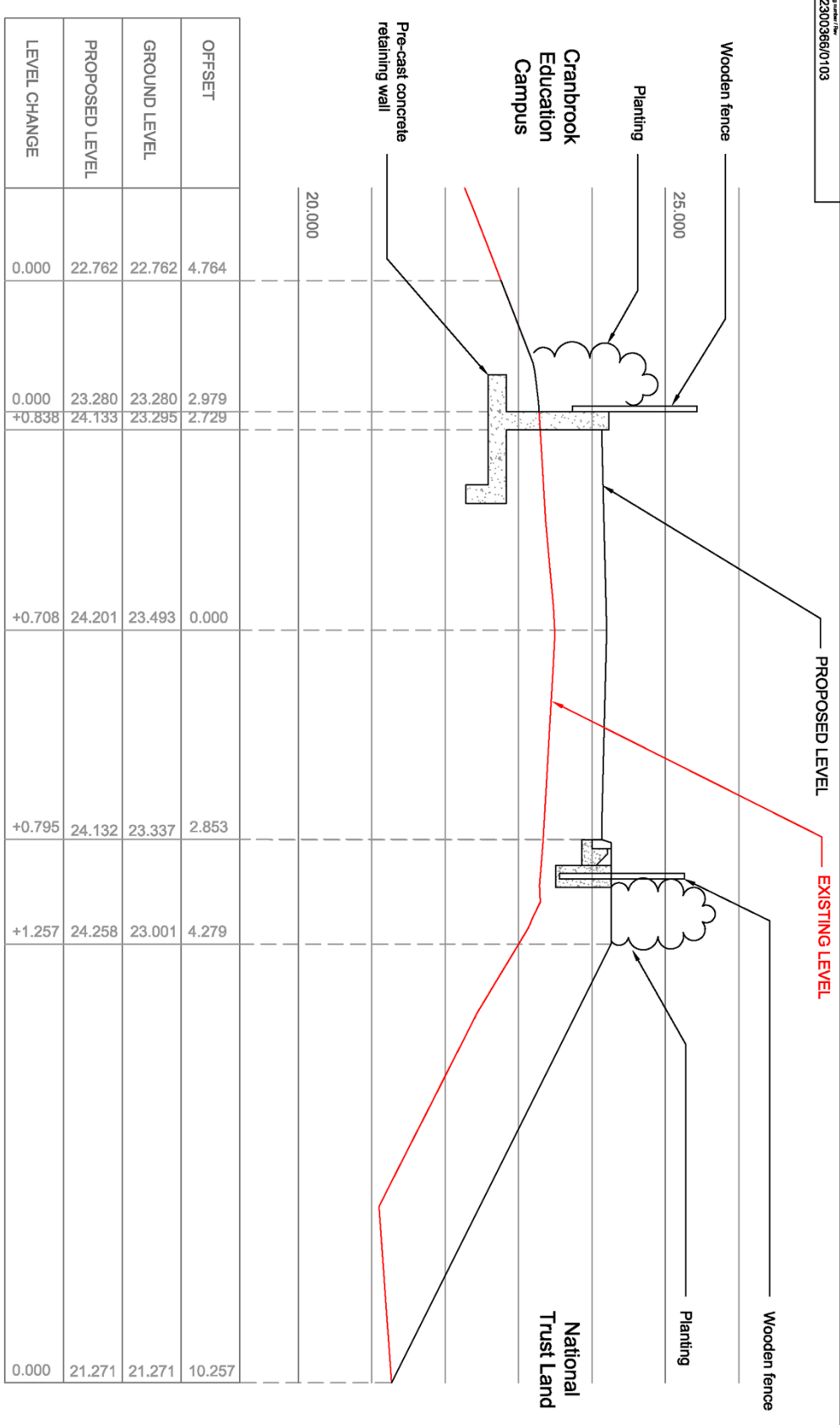
jh161116edh  
sc/cr/crannaford level crossing highway reprofiling  
03 221116





Appendix III  
To PTE/16/64

Project Number: B2300366/0103



LEVEL CHANGE	PROPOSED LEVEL	GROUND LEVEL	OFFSET
0.000	22.762	22.762	4.764
+0.838	24.133	23.295	2.729
+0.708	24.201	23.493	0.000
+0.795	24.132	23.337	2.853
+1.257	24.258	23.001	4.279
0.000	21.271	21.271	10.257

**NOTES:**  
ALL DIMENSIONS IN METRES UNLESS STATED OTHERWISE. GROUND LEVELS SHOWN IN METRES ABOVE ORDNANCE DATUM (m AOD).  
CROSS SECTIONS LOOK FROM NORTH TO SOUTH AND OFFSET IS TAKEN FROM THE CENTRE OF THE CARRIAGEWAY, REFER TO DRAWING NUMBER B2300366/0102 FOR LOCATIONS.  
SHAPE AND SIZE OF PRE-CAST RETAINING WALL ARE INDICATIVE, TO BE CONFIRMED IN DETAILED DESIGN.

**KEY:**  
— EXISTING ALIGNMENT  
— PROPOSED ALIGNMENT

**FOR INFORMATION:**  
Drawing to be used in whole or part only for the purpose of reference and conditions.

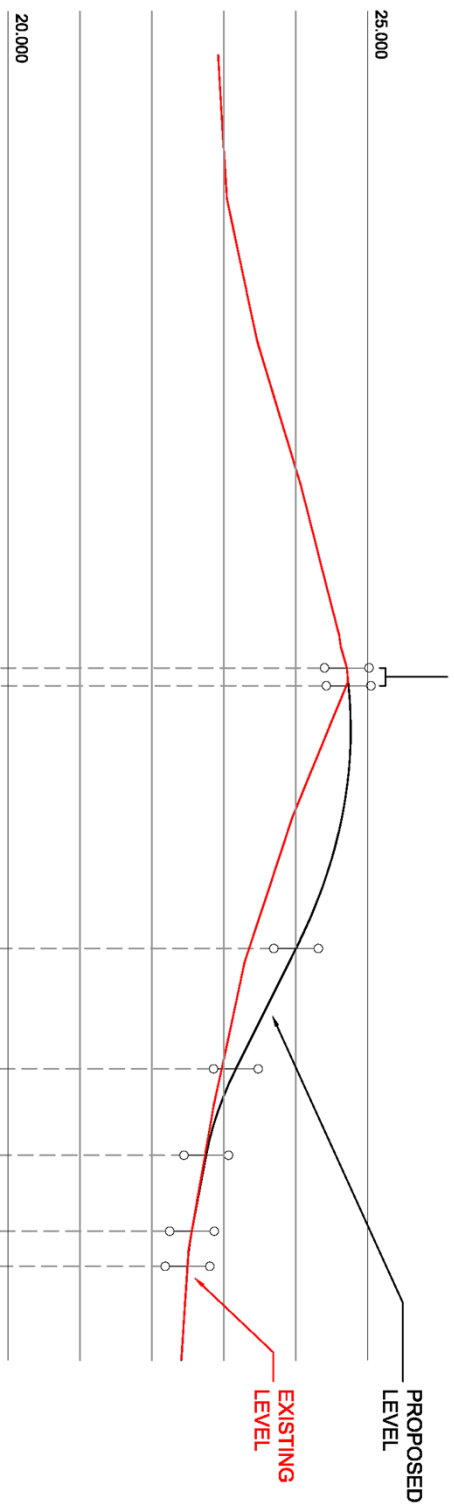
**Project:** CRANNAFORD LEVEL CROSSING  
**Client:** Devon County Council  
**Scale:** 1:250 (H), 1:50 (V)  
**Sheet:** B23007 25/24E  
**Revision:** 1 (25/08/2024)

**Contract Name:** B2300366/0103  
**Contract Number:** B2300366/0103

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NORTH TO SOUTH TO  
BROADCLYST EDUCATION CAMPUS



VERTICAL RADIUS	CHAINAGE	EXISTING GROUND LEVEL	PROPOSED LEVEL
	0.000	22.924	22.924
	28.859	23.045	23.045
	34.892	23.471	23.471
	42.598	24.077	24.077
	43.845	24.587	24.587
	46.886	24.711	24.711
	50.000	24.736	24.736
$r = 33.05$	57.253	24.767	24.767
	60.000	24.735	24.735
	62.095	24.199	24.199
	65.508	23.493	23.493
$r = 22.80$	70.000	24.201	24.201
	73.657	24.006	24.006
	76.463	23.216	23.216
	80.000	23.169	23.169
	81.744	22.757	22.757
	84.178	22.624	22.624
$r = 33.06$	88.129	22.559	22.559
	88.129	22.497	22.497
	88.129	22.445	22.445

**NOTES:**  
 ALL DIMENSIONS IN METRES UNLESS STATED OTHERWISE.  
 LONGITUDINAL SECTION TAKEN ALONG THE CENTRE OF THE CARRIAGEWAY, REFER TO DRAWING NUMBER B2300366/0102 FOR CENTRELINE.  
 Y AXIS SCALE IS 5 TIMES GREATER THAN X AXIS TO BETTER SHOW THE VERTICAL REALIGNMENT.  
 GROUND LEVELS SHOWN IN METRES ABOVE ORDNANCE DATUM (MAD).

**KEY:**  
 EXISTING ALIGNMENT  
 PROPOSED ALIGNMENT

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Client: **Devon County Council**  
 Project: **CRANNAFORD LEVEL CROSSING**  
 Drawing title: **LONGITUDINAL SECTION**  
 Drawing number: **B2300366/0104**  
 Drawing scale: **1:500 X and 1:100 Y & Z**  
 Drawing date: **18/05/2018**

**FOR INFORMATION**  
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