Network Outcomes Contract Clarification Governance Group Clarification	
Reference Number:	NOCC No. 32
Subject Title:	Rehabilitation cut to waste and additional work activities
Issue Date:	09/09/2019
Clarification Purpose	Clarification is provided to ensure the NOC is being interpreted consistently. The clarification does not remove or supersede the Network Outcomes Contract documentation.

SUBJECT

It has come to the Agency's attention via a query from a NOC, that the there is some misunderstanding around payment for Rehabilitation works that involve a 'cut to waste' situation and or other additional works that may be required. This scenario can occur on the road shoulder, at the ends of the Rehabilitation where the treatment ties into the existing pavement, in a cutting, or where the road shoulders are steeper or narrower.

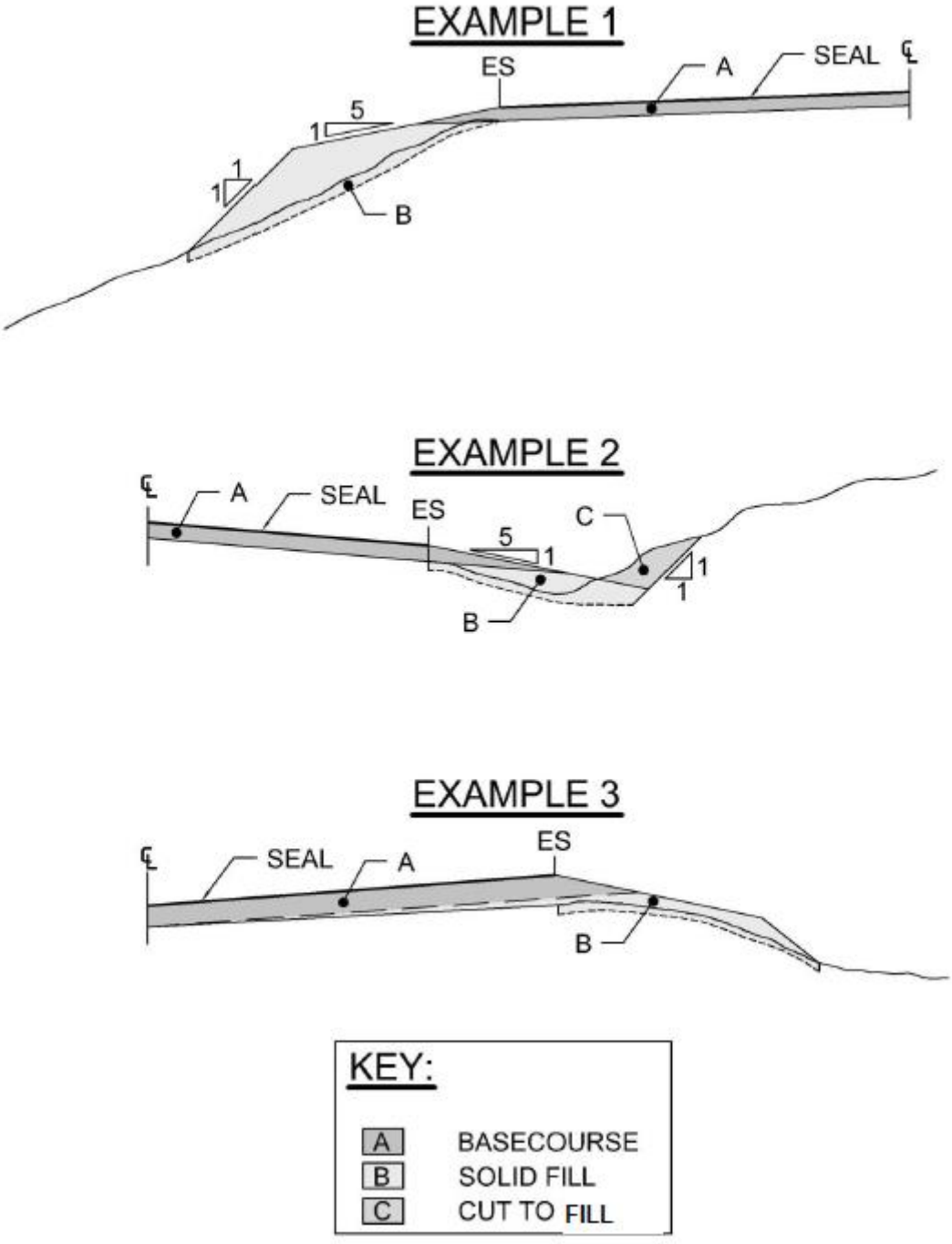
BACKGROUND

A NOC submitted a variation request relating to the construction of Rehabilitation sites in regards 'cut to waste' of material at tie-in joints at either end of the treatment length and 'cut to waste' of material in the shoulders.

Appendices section 6.2 discusses the typical shoulder details as per the examples outlined over.

The additional Notes in this same Appendices section provide a further explanation to address such subject situations.

The Contract requires the Contractor to provide designs utilising best practice methodologies and references various specifications in the Appendix. TNZ B/02 provides standard details for the construction of tie ins (tapers).



NOTES

The solid measure of basecourse to be allowed in the scheduled rate is Area A (as shown in the typical cross-sections) and shall be based on the nominal overlay depth as defined in the Maintenance Specification, Tables 6.1.2 to 6.1.3 within the existing cross-section. This volume shall include the first 0.5m of unsealed shoulder (i.e. to the point where the bottom of the overlay layer meets the new shoulder surface.

For clarity, the tendered base rates shall also allow for the removal of all high lip, shoulder vegetation and all earthworks required to form a 1:5 shoulder slope that extends 2.0m beyond the new edge of seal (thus providing a surface water channel at least 0.4m deep); refer to the areas marked B and/or C on the typical cross-sections.

Area B represents the quantity of materials in excess of that allowed for in the Area A base rate as defined above. Area B therefore provides for additional material to address deep ruts, uneven surface shape, camber or super elevation, filling of dips in the longitudinal profile, additional seal width and /or shoulder fill where it is agreed these improvements

are necessary. (ie Area B equals (Total volume of basecourse + Total volume of sub basecourse + Total volume of solid fill) minus (Total volume of Area A Basecourse)
The Area B quantity shall be paid for at the appropriate rates for additional basecourse/sub basecourse or solid fill material.
It is recognised that the typical profiles indicated in examples 1 to 3 are not always achievable or cost effective due to site specific issues or constraints. Amendments will often be required in order to provide a more cost effective solution. These issues shall be discussed and the outcomes agreed with the Principal prior to completing final design. Examples might include the use of steeper and /or narrower unsealed shoulder slopes in order to best fit the existing formation width, the use of gabion baskets to widen the formation, the use of subsoil drains to avoid extensive earthworks in cuttings and the likes.
Such changes shall be reflected when determining the final quantity associated with Area B. Other agreed solutions shall be at scheduled contract rates or by negotiation where none exist.

The associated Basis of Payment Clause states:

6.3.4.4 Cut to Fill

Payment will be made for the total solid volume in cubic metres of material cut to fill and constructed as specified. The quantity for payment purposes will be the solid volume following placement and compaction of the filling.

The tendered rate shall be in full compensation for the supply of all plant and labour required for the complete removal off-site of the waste material as specified.

The intention is that Area C 'cut to fill', would be the preference to reutilise the material on site but if this was not feasible and if the material cannot be suitably used on site then some material would be cut to waste to a suitable, agreed nearby network infill location, and that both of these activities would be part of this tendered rate.

This rate for item 6.3.4.4 Cut to Fill is listed in the Schedule of Prices.

Rehabilitation design process

There are several aspects to a standard overlay type Rehabilitation:

1. The basecourse overlay (measured as area A)
2. Any additional basecourse/sub basecourse or solid fill subgrade material (measured as Area B)

Then there will be situations where:

a) Material for 'cut to fill' activities (measured as area C) can be wasted (i.e. reutilised) on site or cut to waste and reutilised onto the network nearby, or

b) Areas that there are "cut to waste" additional earthwork type items that will need to be advised, incorporated into the design, quantified, costed and agreed as part of the annual plan renewal treatment site costs.

There will be situations as the Appendices section 6.2 Notes outline on the shoulder areas, or in a cutting where it is **not** feasible to "cut & fill". In these instances the excess materials excavated from the shoulder or to form the shoulder and the SWC may need to be "cut to waste" and or additional works such as gabions or sub soil drains may be required.

RESPONSE

1. The intention is that the Examples Area C 'cut to fill' assumes this material/ quantity can be suitably used on site, then if so that activity would be part of the tendered rates being the SOP item 6.3.4.4.

2. Alternatively if that Area C noted as 'cut to fill' had to be 'cut to waste' then the SOP item 6.3.4.4 contract rate also expects the Contractor to have allowed for that material/quantity to be removed off site and reutilised as an infill material nearby on the network to obtain the best value for money outcome.

3. The Appendices section 6.2 Notes advise:
   "It is recognised that the typical profiles indicated in examples 1 to 3 are not always achievable or cost effective due to site specific issues or constraints. Amendments will often be required in order to provide a more cost effective solution.
   These issues shall be discussed and the outcomes agreed with the Principal prior to completing final design. Examples might include the use of steeper and /or narrower unsealed shoulder slopes in order to best fit the existing formation width, the use of gabion baskets to widen the formation, the use of subsoil drains to avoid extensive earthworks in cuttings and the likes.
   Such changes shall be reflected when determining the final quantity associated with Area B. Other agreed solutions shall be at scheduled contract rates, or by negotiation where none exist".

4. Basis of Payment clearly states that tendered rate includes supplying and complete construction of the rehabilitation, this includes the construction of tie ins (tapers) where necessary.

5. Payment is made on the total area (m2) completed.

Recommended actions:

Each NOC should

1. Where a Rehabilitation treatment site initial design assessment identifies that additional, non-standard works and additional quantities are required (e.g. earthworks, culvert extensions, cut to waste activities in a cutting, additional shoulder works due to an approved seal widening, steep shoulder slopes that may require gabion retaining walls or sub soil drain works); then these issues shall be identified and discussed and the outcomes agreed with the Principal to allow suitable allowance to be made within the Design and the Annual Plan process and also re-confirmed again later prior to completing final design.

2. It is expected that the Rehabilitation treatment length incorporates the required longitudinal 'tie in' (taper) at each end so that the transition from new to existing pavement meets the required smooth transition to avoid any

non-compliance with the contract roughness performance criteria and is in line with best practice. The construction of these tie ins are included within the Rehabilitation contract rates.

3. Where a longitudinal tie in connection requires any proposed additional works, then the process outlined in 1 above must be followed. i.e. if investigations have demonstrated that the tie in area sub grade and basecourse depths are inadequate or contain soft spots etc. then this additional work shall be clearly identified and costed and the outcomes agreed with the Principal to allow suitable allowance to be made within the Design and the Annual Plan process and also re-confirmed again later prior to completing final design.

   Any proposed seal widening to achieve the desired safe-road and roadside carriageway widths, is an additional safety management activity that has to be assessed, justified, incorporated into the design, approved and funded from the Associated Improvements funded programme. It is recommended this assessment is completed at least two years in advance of the renewal to allow for approvals to be obtained and funding to be made available in advance of the design and the planned construction year.

4. Two years in advance of each Rehabilitation, the NOC Safety Management team shall also complete the Pavement Rehabilitation Safety Assessment Form, identify any required Safety Improvements that need incorporated into the works (e.g. a barrier system, culvert extensions, geometric improvements, signs, hazard removal), discuss, justify and agree the additional safety works with the Principal, submit for funding as per the Annual Plan process, then incorporate any agreed and funded works into the final design. *(refer to Maintenance Specification section 6.1.2 Pavement Rehabilitation Design and Appendix 6.1, Pavement Rehabilitation Safety Assessment Form)*