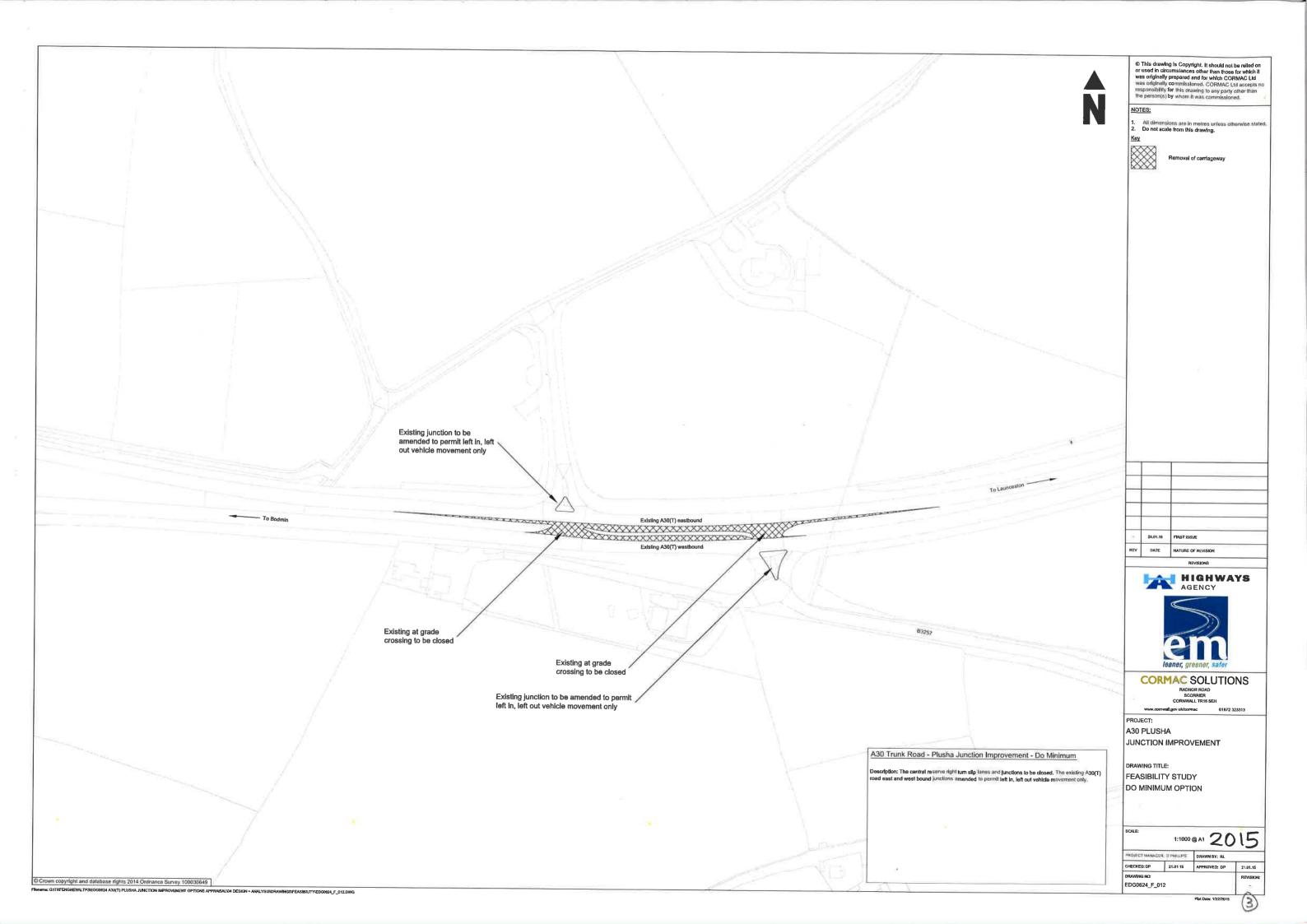


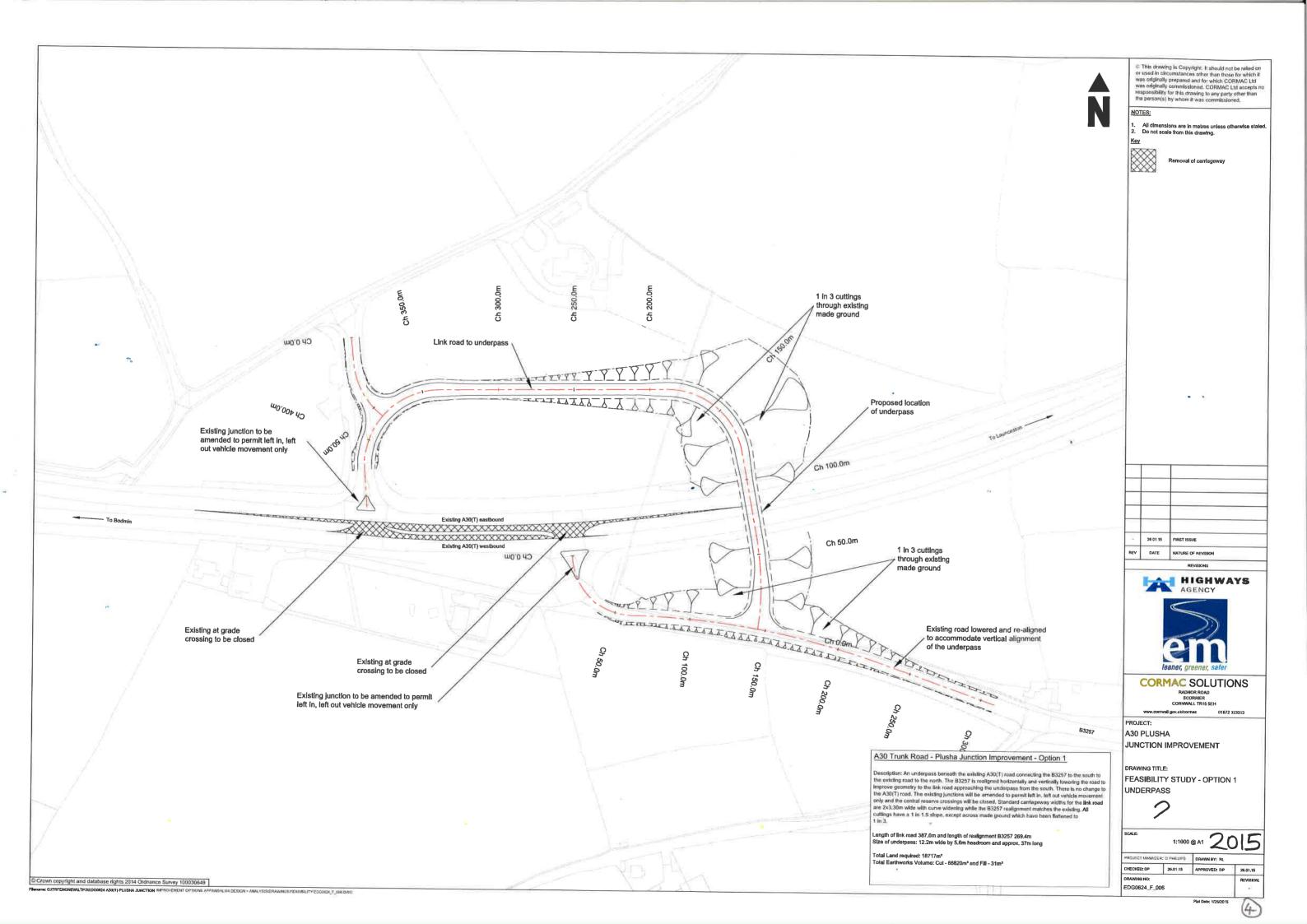
OPTION	BENEFITS EXPECTED	RISK AND ISSUES
Option 1 Underpass	<ul> <li>Minimal visual impact</li> <li>Utilises existing junctions</li> <li>Construction of side roads off line</li> <li>Access to properties &amp; businesses maintainable at all times during the construction phase</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south, though underpass less likely to be used than an overbridge</li> </ul>	<ul> <li>Higher Cost Option</li> <li>High impact on land severance, especially to north of A30, but majority of remaining parcels of land large enough to be deemed usable by landowner</li> <li>Traffic management requiring contraflow for 12 months, causing major disruption to the network</li> <li>Drainage will need to be carefully designed to ensure underpass is adequately drained &amp; an ongoing maintenance liability.</li> <li>Diversion to existing services will be required which will be costly due to presence of fibre optic cables</li> <li>Construction within made ground areas, material is uncertain for contaminants or make up and may increase costs once excavation undertaken</li> <li>Surplus of material in excess of 66,000m³ – processing on site unlikely &amp; costly to remove &amp; dispose.</li> <li>Consideration needs to be given to lighting the underpass if required</li> </ul>
Option 2 Underpass	Minimal visual impact     Construction of side roads off line     Access to properties & businesses maintainable at all times during the construction phase     Potential improvement for access across A30 linking PROWS to the north & south though underpass less likely to be used than an overbridge.	<ul> <li>Higher Cost Option</li> <li>High impact on land severance including acquisition of entire field to north of A30</li> <li>Traffic management requiring contraflow for 12 months, causing major disruption to the network</li> <li>Drainage will need to be carefully designed to ensure underpass is adequately drained &amp; an ongoing maintenance liability.</li> <li>Diversion to existing services will be required which will be costly due to presence of fibre optic cables</li> <li>Construction within made ground areas, material is uncertain for contaminants or make up and may increase costs once excavation undertaken</li> <li>Surplus of material in excess of 127,000m³ – processing on site unlikely &amp; costly to remove &amp; dispose.</li> <li>Consideration needs to be given to lighting the underpass if required</li> </ul>
米 Option 2A Underpass PREFERRED の別のJ	<ul> <li>Minimal visual impact</li> <li>Construction of side roads off line</li> <li>Access to properties &amp; businesses maintainable at all times during the construction phase</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south though underpass less likely to be used than an overbridge.</li> </ul>	<ul> <li>Higher Cost Option</li> <li>High impact on land severance including acquisition of entire field to north of A30</li> <li>Traffic management requiring contraflow for 12 months, causing major disruption to the network</li> <li>Drainage will need to be carefully designed to ensure underpass is adequately drained &amp; an ongoing maintenance liability.</li> <li>Diversion to existing services will be required which will be costly due to presence of fibre optic cables</li> <li>Construction within made ground areas, material is uncertain for contaminants or make up and may increase costs, once excavation undertaken</li> <li>Surplus of material in excess of 132,000m³ – processing on site unlikely &amp; costly to remove &amp; dispose.</li> <li>Consideration needs to be given to lighting the underpass if required</li> </ul>
Option 3 Overbridge	<ul> <li>Ability to construct off line with minimal impact on traffic.</li> <li>Minimal disturbance to existing utilities</li> <li>Minimal impact on existing drainage</li> <li>Access maintainable to service area for duration of construction phase</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south &amp; an overbridge would have more usage than the underpass options</li> </ul>	<ul> <li>Medium Cost Option</li> <li>High impact on land severance, but majority of remaining parcels of land large enough to be deemed usable by landowner</li> <li>Traffic management required for a duration of 9 to 12 months. Closure required overnight for installation of bridge beams.</li> <li>Contraflow required for installation of bridge deck</li> <li>Visual impact of bridge option greater than an underpass</li> <li>Requirement to import suitable material costly</li> <li>Construction over made ground costly &amp; requires specific geotechnical design and extensive Geotechnical ground investigations.</li> <li>Visual intrusion of the embankment for the B3257 re-alignment</li> <li>Vertical re-alignment of B3257 would be problematic to maintain vehicular access during construction for this road without providing a temporary route.</li> <li>Widening of the side road to the north required which would restrict access during the construction phase.</li> </ul>
Option 3A Overbridge	<ul> <li>Ability to construct off line with minimal impact on traffic.</li> <li>Minimal disturbance to existing utilities</li> <li>Minimal impact on existing drainage</li> <li>Access maintainable to service area for duration of construction phase</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south &amp; an overbridge would have more usage than the underpass options.</li> </ul>	<ul> <li>•Medium Cost Option</li> <li>• High impact on land severance, but majority of remaining parcels of land large enough to be deemed usable by landowner</li> <li>• Traffic management required for a duration of 9 to 12 months. Closure required overnight for installation of bridge beams.</li> <li>• Contraflow required for installation of bridge deck</li> <li>• Visual impact of bridge option greater than an underpass</li> <li>• Requirement to import suitable material costly</li> <li>• Construction over made ground costly &amp; requires specific geotechnical design and extensive Geotechnical ground investigations.</li> <li>• Visual intrusion of the embankment for the B3257 re-alignment</li> <li>• Vertical re-alignment of B3257 would be problematic to maintain vehicular access during construction for this road without providing a temporary route.</li> </ul>
* Option 3B Overbridge PREFERRED OPTION	<ul> <li>Ability to construct off line with minimal impact on traffic.</li> <li>Minimal disturbance to existing utilities</li> <li>Minimal impact on existing drainage</li> <li>Access maintainable to service area for duration of construction phase</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south &amp; an overbridge would have more usage than the underpass options.</li> </ul>	<ul> <li>•Medium Cost Option</li> <li>• High impact on land severance, but majority of remaining parcels of land large enough to be deemed usable by landowner</li> <li>• Traffic management required for a duration of 9 to 12 months. Closure required overnight for installation of bridge beams.</li> <li>• Contraflow required for installation of bridge deck</li> <li>• Visual impact of bridge option greater than an underpass</li> <li>• Requirement to import suitable material costly</li> <li>• Construction over made ground costly &amp; requires specific geotechnical design and extensive Geotechnical ground investigations.</li> <li>• Visual intrusion of the embankment for the B3257 re-alignment</li> <li>• Vertical re-alignment of B3257 would be problematic to maintain vehicular access during construction for this road without providing a temporary route.</li> </ul>

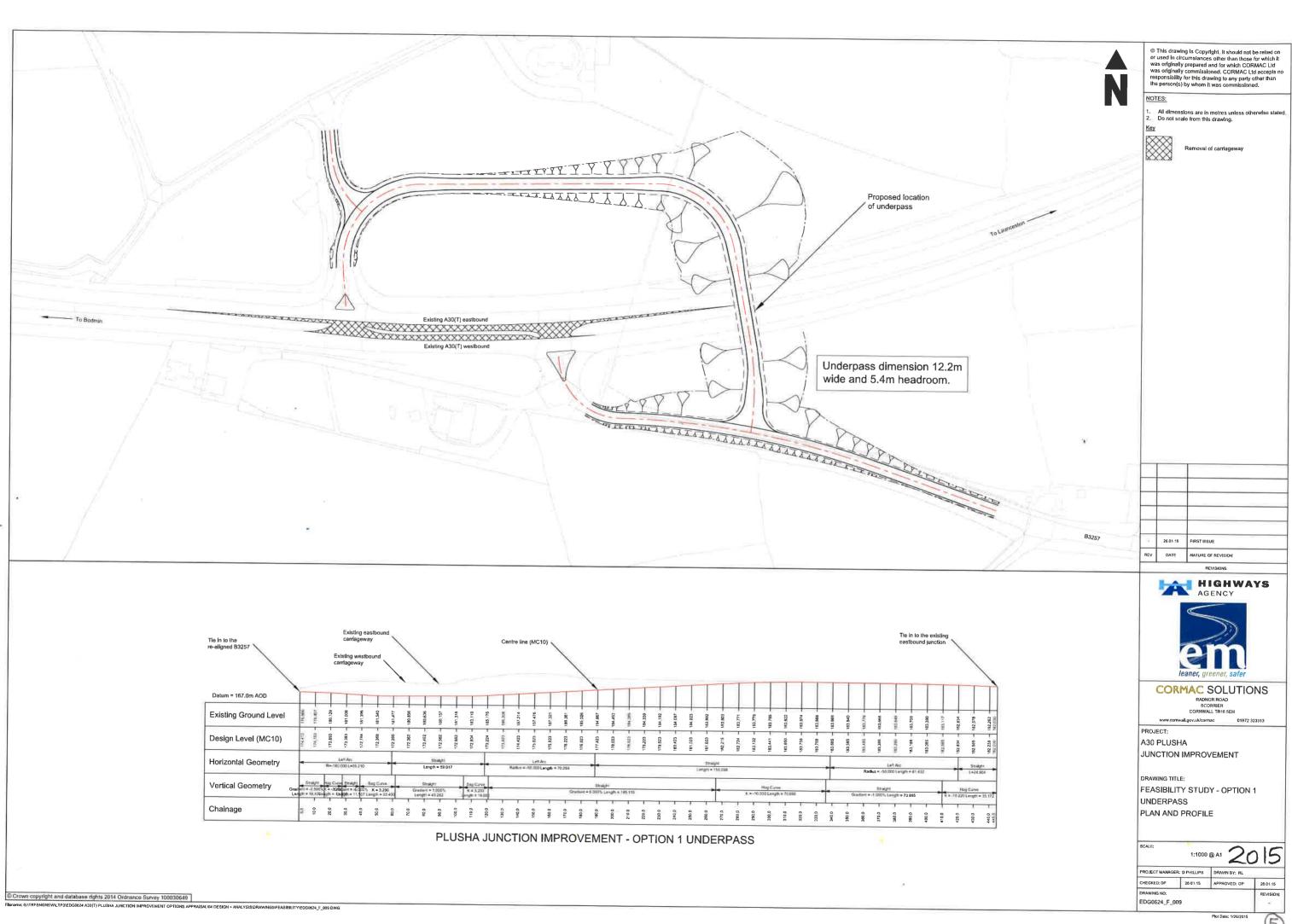


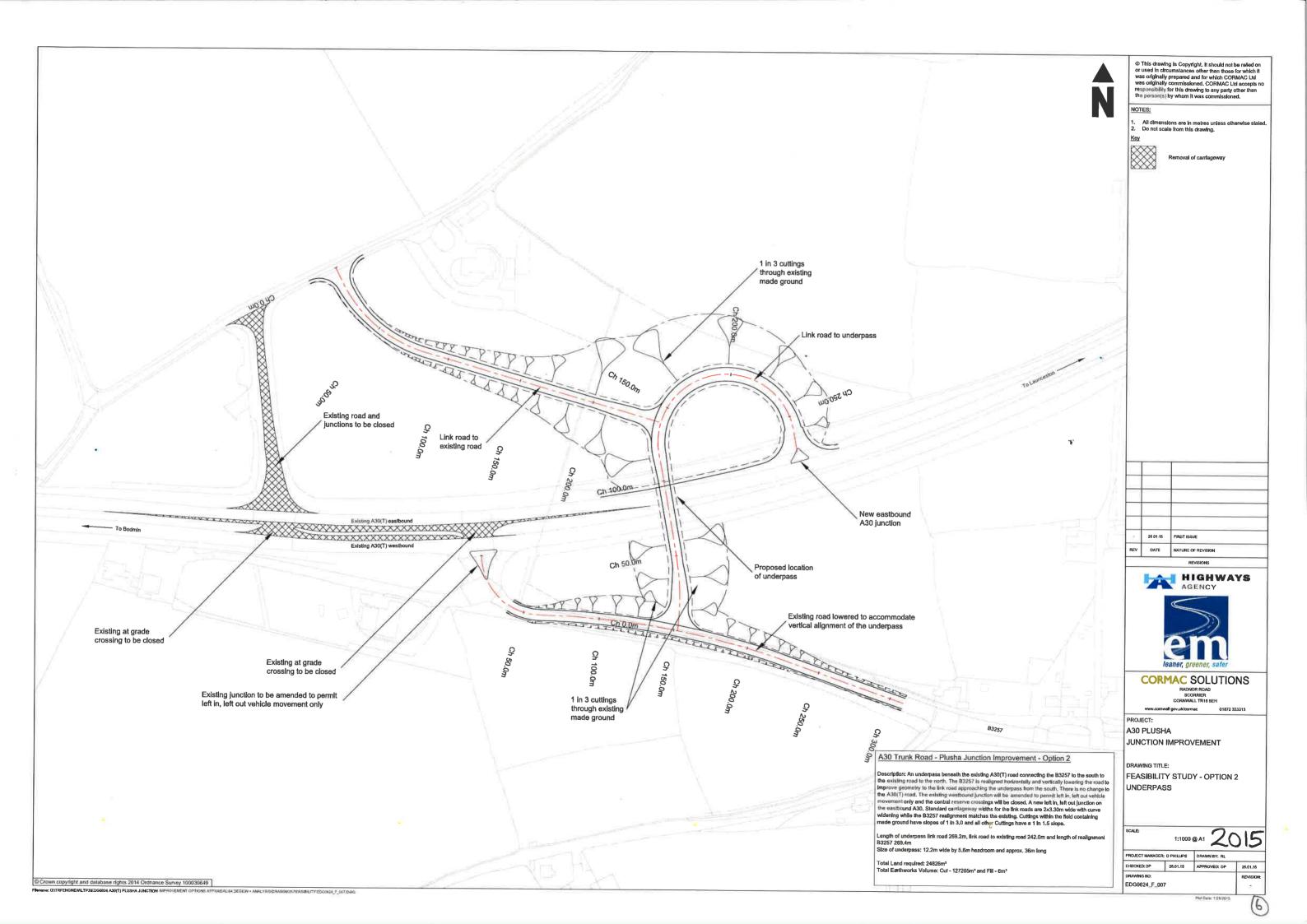
OPTION	BENEFITS EXPECTED	RISK AND ISSUES
Option 3C Overbridge	<ul> <li>Ability to construct off line with minimal impact on traffic.</li> <li>Minimal disturbance to existing utilities</li> <li>Minimal impact on existing drainage</li> <li>Access maintainable to service area for duration of construction phase</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south &amp; an overbridge would have more usage than the underpass options.</li> <li>Good balance of cut / fill materials</li> <li>Visual intrusion of embankment for Options 3, 3A &amp; 3B removed</li> </ul>	<ul> <li>•Medium Cost Option</li> <li>• High impact on land severance, but majority of remaining parcels of land large enough to be deemed usable by landowner</li> <li>• Traffic management required for a duration of 9 to 12 months. Closure required overnight for installation of bridge beams.</li> <li>• Contraflow required for installation of bridge deck</li> <li>• Visual impact of bridge option greater than an underpass</li> <li>• Requirement to import suitable material costly</li> <li>• Construction over made ground costly &amp; requires specific geotechnical design and extensive Geotechnical ground investigations.</li> </ul>
Option 4 Overbridge	<ul> <li>Ability to construct off line with minimal impact on traffic.</li> <li>Construction avoids area of made ground</li> <li>Minimal disturbance to existing utilities</li> <li>Minimal impact on existing drainage</li> <li>Access maintainable to service area for duration of construction phase</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south &amp; an overbridge would have more usage than the underpass options.</li> </ul>	<ul> <li>Lower Cost Option</li> <li>Medium impact on land severance but minimised to two main fields either side of the A30</li> <li>Traffic management required for a duration of 9 to 12 months. Closure required overnight for installation of bridge beams.</li> <li>Contraflow required for installation of bridge deck</li> <li>Due to length of single span bridge, thickness and size of structure is greater than other options and would be more of a visual impact that the other overbridge options</li> <li>Requirement to import suitable material costly</li> <li>Construction of eastbound off slip required for first so that access is maintainable to the north at all times &amp; permit start construction on bridge abutments.</li> <li>Loss of parking areas for garage and restaurant</li> <li>Bridge &amp; embankment would obscure visibility to restaurant (westbound) and the garage (eastbound) which would be unpopular with the businesses &amp; a potential loss of custom</li> </ul>
Option 5 Overbridge	<ul> <li>Ability to construct off line with minimal impact on traffic.</li> <li>Construction avoids area of made ground</li> <li>Minimal disturbance to existing utilities</li> <li>Minimal impact on existing drainage</li> <li>Access maintainable to service area for duration of construction phase</li> <li>Land take minimised to prevent whole fields from being acquired</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south &amp; an overbridge would have more usage than the underpass options.</li> <li>Moves access to services to an improved location from the existing crossroads</li> </ul>	<ul> <li>Lower Cost Option</li> <li>Lower impact on land severance to other options with acquisition limited to edges of field boundaries</li> <li>Ability to construct off line with minimal impact on traffic.</li> <li>Construction avoids area of made ground</li> <li>Minimal disturbance to existing utilities</li> <li>Minimal impact on existing drainage</li> <li>Access maintainable to service area for duration of construction phase</li> <li>Land take minimised to prevent whole fields from being acquired</li> <li>Potential improvement for access across A30 linking PROWS to the north &amp; south &amp; an overbridge would have more usage than the underpass options.</li> <li>Moves access to services to an improved location from the existing crossroads</li> </ul>

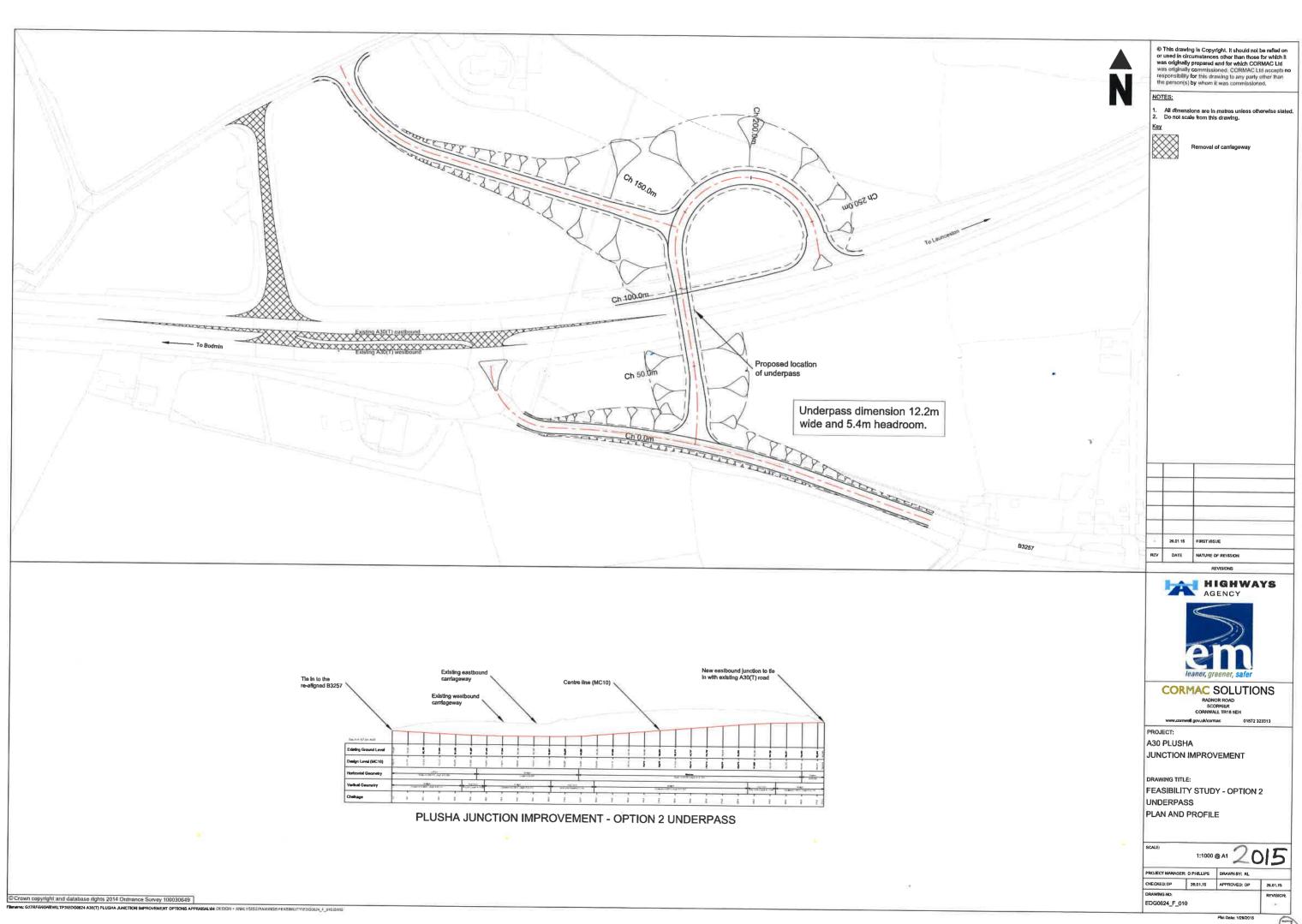
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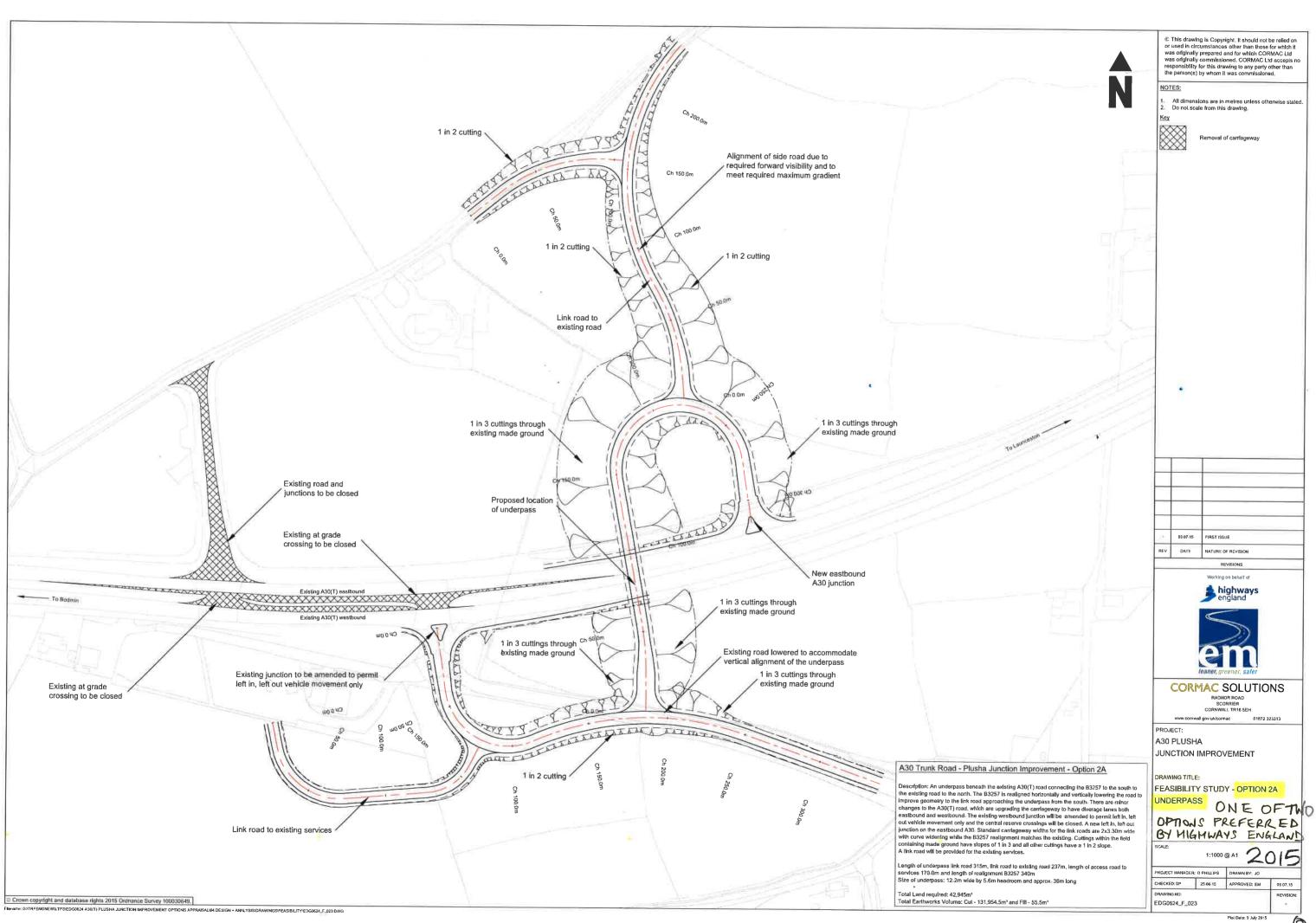


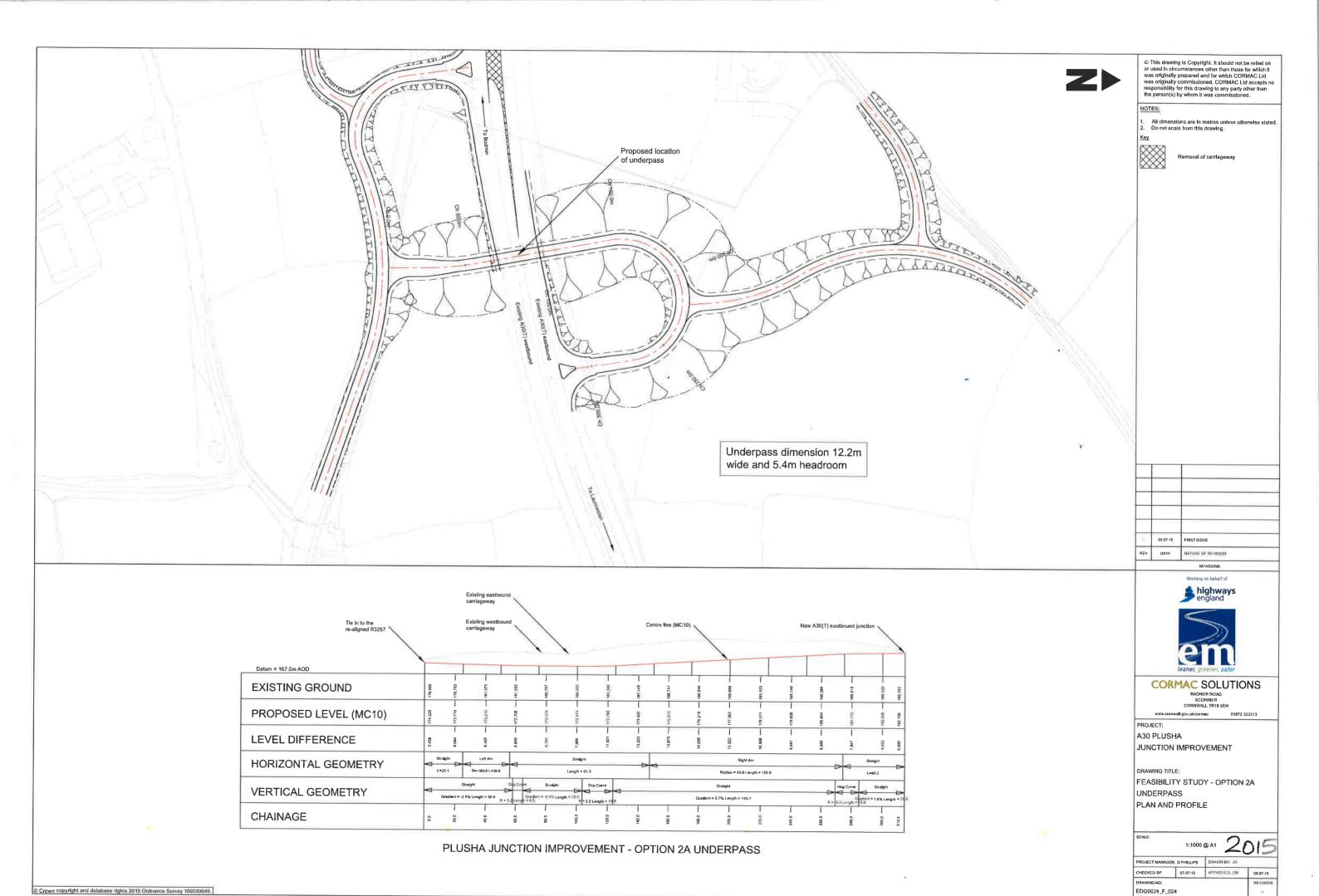




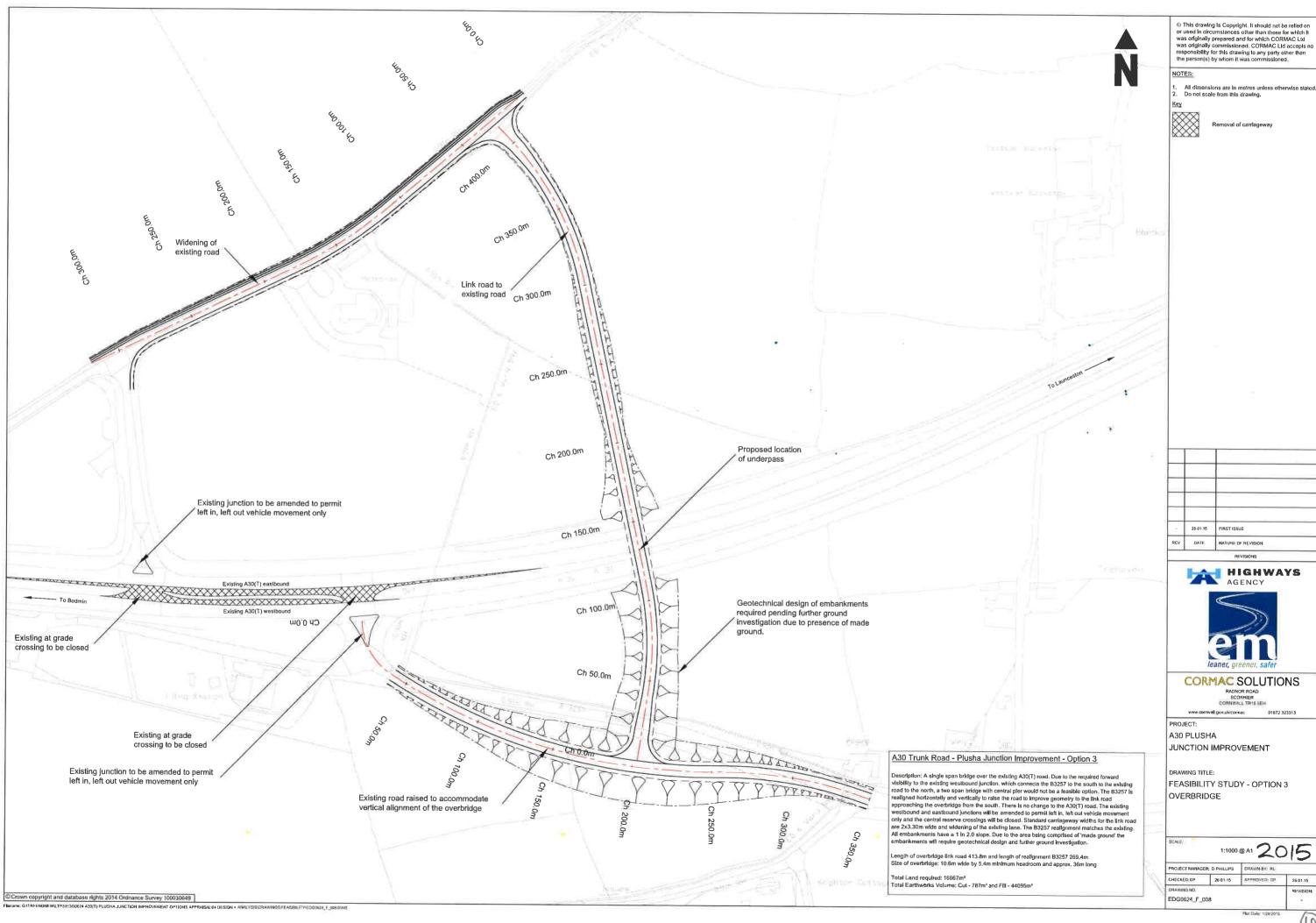


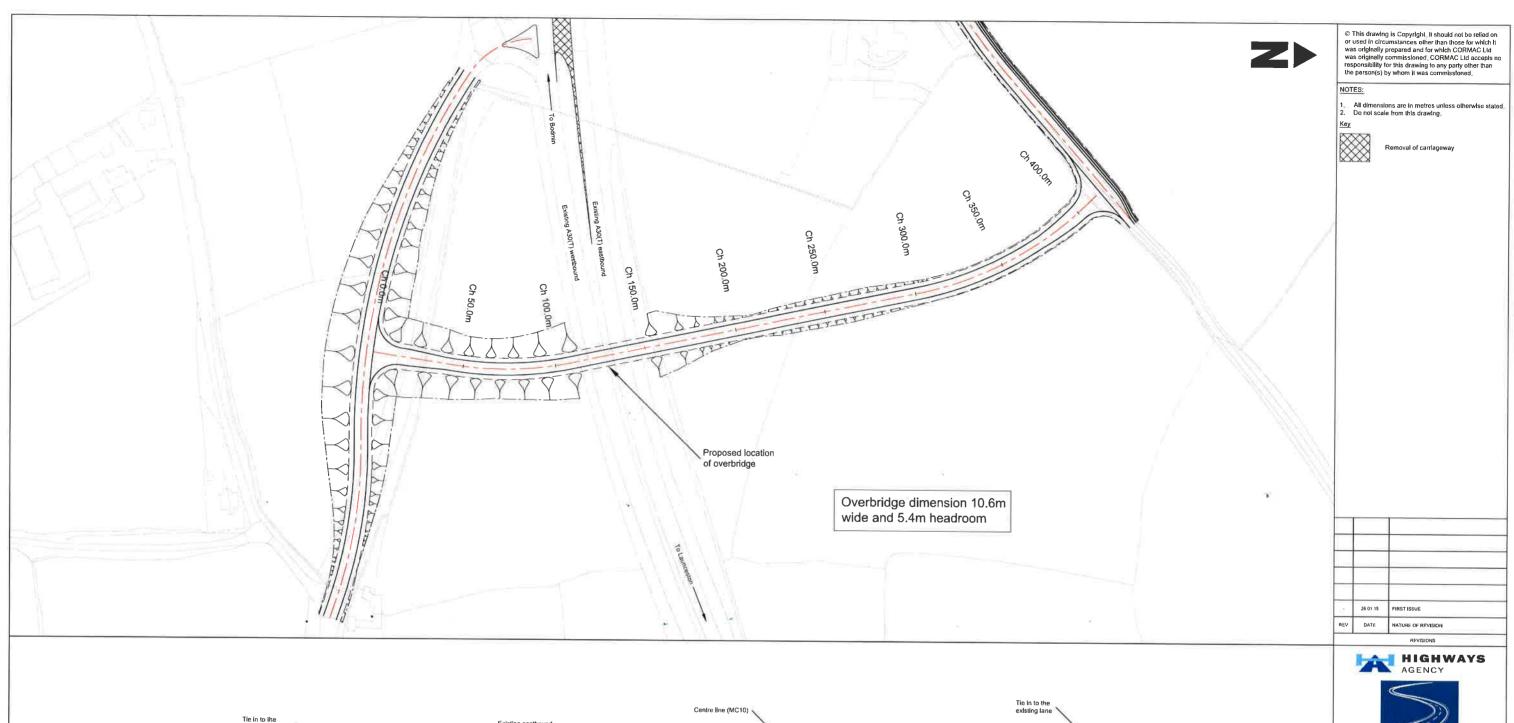


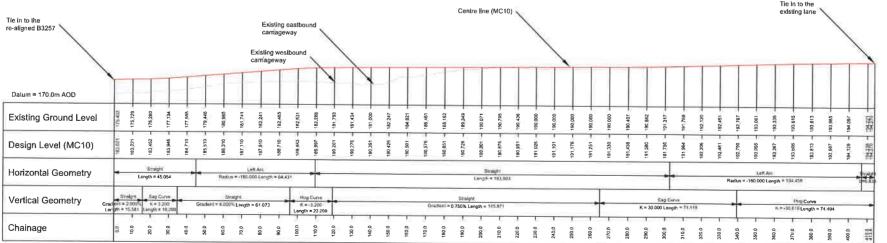




Plot Date: 9 July 201







PLUSHA JUNCTION IMPROVEMENT - OPTION 3 OVERBRIDGE



## **CORMAC SOLUTIONS**

## PROJECT:

A30 PLUSHA

JUNCTION IMPROVEMENT

## DRAWING TITLE:

FEASIBILITY STUDY - OPTION 3 OVERBRIDGE

PLAN AND PROFILE

1:1000@A1 2015

PROJECT MANAGER: D PHILLIPS DRAWN BY: RL CHECKED: DP 21.01.15 APPROVED: DP 21.01.15 EDG0624\_F\_011

