

22163-01-001

## Proposed Car Park at The Rock of Dunamase, Portlaoise

### ROAD SAFETY AUDIT STAGE 1 / 2



January 2023

**ROADPLAN**  
CONSULTING

7, Ormonde Road  
Kilkenny  
R95 N4FE

Tel: 056 7795800  
[info@roadplan.ie](mailto:info@roadplan.ie)  
[www.roadplan.ie](http://www.roadplan.ie)

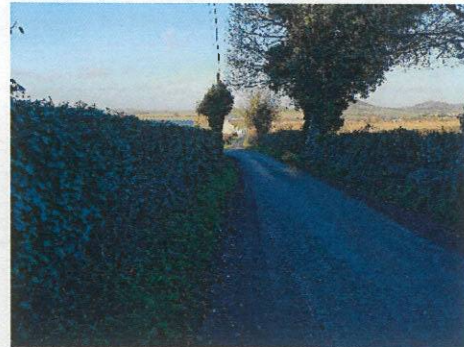
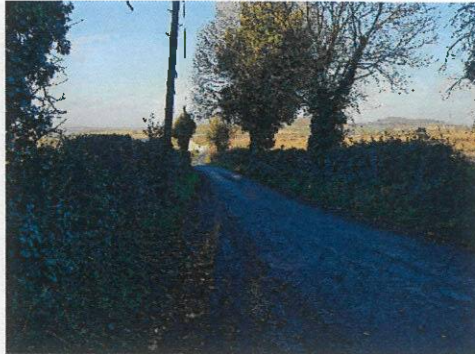
## 1. INTRODUCTION

- 1.1 This report describes a Stage 1 / 2 Road Safety Audit carried out at the Rock of Dunamase, Portlaoise on behalf of Laois County Council.
- 1.2 The audit team members were as follows:
- Dermot Donovan, BE CEng FIEI.  
Auditor Number DD50250
  - George Frisby, BE CEng MIEI  
Auditor Number GF51255
- 1.3 Both audit team members visited the site on the 20<sup>th</sup> December 2022. The audit comprised an examination of the drawings relating to the scheme supplied by Laois County Council and an examination of the site.
- 1.4 The speed limit of road at the site entrance is 80 km/h.
- 1.5 This Stage 1 / 2 Audit has been carried out in accordance with the relevant sections of TII GE-STY-01024. The team has examined only those issues within the design relating to the road safety implications of the scheme and has therefore not examined or verified the compliance of the design to any other criteria.
- 1.6 All problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise accident occurrence.
- 1.7 Appendix A contains copies of the audited drawings.

## 2. STAGE 1 / 2 AUDIT

### 2.1 Problem: Obstructed sightlines to left

Sight distance at the access location is obstructed by the existing roadside boundaries. The sightlines are indicated on the drawings, but it is not stated that the existing obstructions to visibility are to be removed (though it is expected that it is intended to do so. Retention of obstructions to sightlines could increase the risk of side swipe collisions between mainline traffic and traffic turning from the car park.

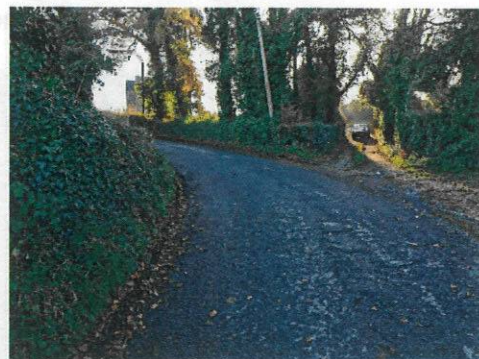


#### Recommendation

Remove the boundaries or set them back adequately to provide clear sightlines.

### 2.2 Problem: Obstructed stopping sight distance

The length of stopping sight distance available around the bend on the mainline is deficient. A consequence is that intervisibility distance between a driver turning right into the car park access and an opposing northbound driver on the mainline may be insufficient. Downhill speeds of northbound traffic may be relatively high. These factors may increase the risk of turning collisions between vehicles at the access to the car park.



#### Recommendation

Remove or set-back the boundary on the east side of the road to ensure that adequate stopping sight distance is available.



### 2.3 Problem: Inconspicuous adjacent junction

The adjacent public road junction is inconspicuous; it is obscured by the roadside boundary. A driver exiting the car park and checking to the left may not see the junction and may be taken unawares by a vehicle emerge from it. There is no junction warning sign on the northbound approach that, if present, would highlight the existence of the junction. Another issue relating to road safety is that the sightlines at the existing public road junction are very constrained (although that is a pre-existing issue not related to the scheme).

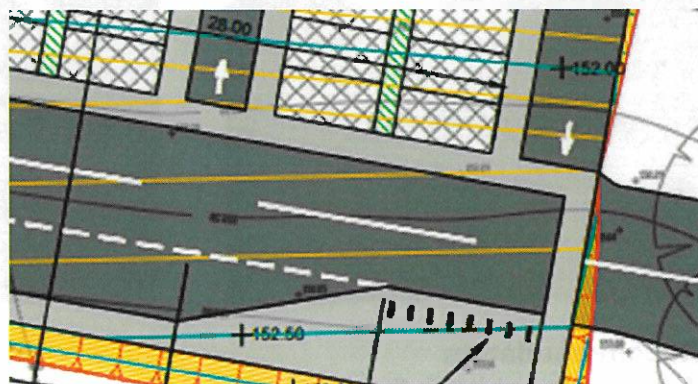


#### Recommendation

Remove or set-back the boundary sufficiently so that a driver exiting the car park has visibility of the adjacent public road junction. This would provide the additional benefit of improving the sightline to the right from the adjacent public road junction. Also, provide a junction warning sign on the northbound approach to the public road junction.

### 2.4 Problem: Footpaths crossing roads

Marked footpaths within the car park are shown to be extended across the internal roads of the car park. Pedestrians may be at risk of being struck by circulating or turning vehicles if either the driver or pedestrian misunderstands the intended priority.



**Recommendation**

Where pedestrians will cross traffic streams, provide crossings rather than footpaths.

**2.5 Problem: Approach Signage**

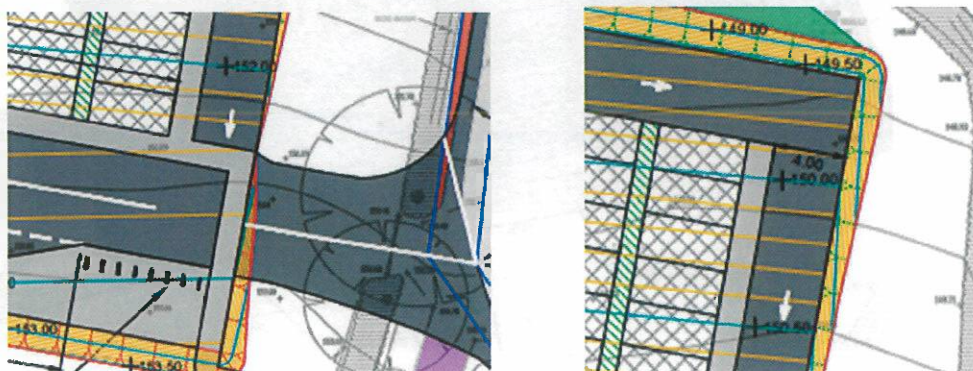
Signage for the Rock of Dunamase is currently provided from the N80/L6831 junction. However, given the location of the new carpark it is likely that visitors will be approaching from the N80/L7830 junction which provides a more direct route to the new carpark. As a result the presence of the existing signage at the N80/L6831 junction may lead to driver confusion.

**Recommendation**

Relocate the existing signage from the N80/L6831 junction to the N80/L7830 junction.

**Observations****2.6 Observation: No turning radii**

The insides of turns at junctions within the carpark have not been rounded. Drivers may find it difficult to turn with ease. Provide rounding on the insides of bends where traffic turns so that the paved surface provided is adequate to accommodate the swept paths of the turning vehicles.

**2.7 Observation: Glare**

On the day of the site visit there was low winter afternoon sun, and the issue of glare was noted for southbound drivers. As much as possible, roadside vegetation should be retained to assist in shielding the driver from glare.





### 2.8 Observation: Accessibility

Six accessible parking spaces are to be provided. It is not clear how wheelchair users or other mobility impaired persons should travel from the car park to their destination. The adjacent track is steep, roughly surfaced and inadequate for use; the public road has bends and would be unsafe to use. Consideration should be given to the identification of an accessible route between the car park and the visitor attraction site.



### 2.9 Observation: Potentially excessive gradients

The land on which the car park is to be placed is sloped. Excessive falls would increase road safety risk. It should be ensured that surfaces do not have excessive gradients.

**3. AUDIT TEAM STATEMENT**

3.1 We certify that we have examined the drawings listed in Appendix A and have inspected the road. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme.

Signed.....*Dermot Donovan*..... Dermot Donovan  
Date .....23<sup>rd</sup> January 2023.....

Signed.....*George Frisby*..... George Frisby  
Date ..... 23<sup>rd</sup> January 2023.....

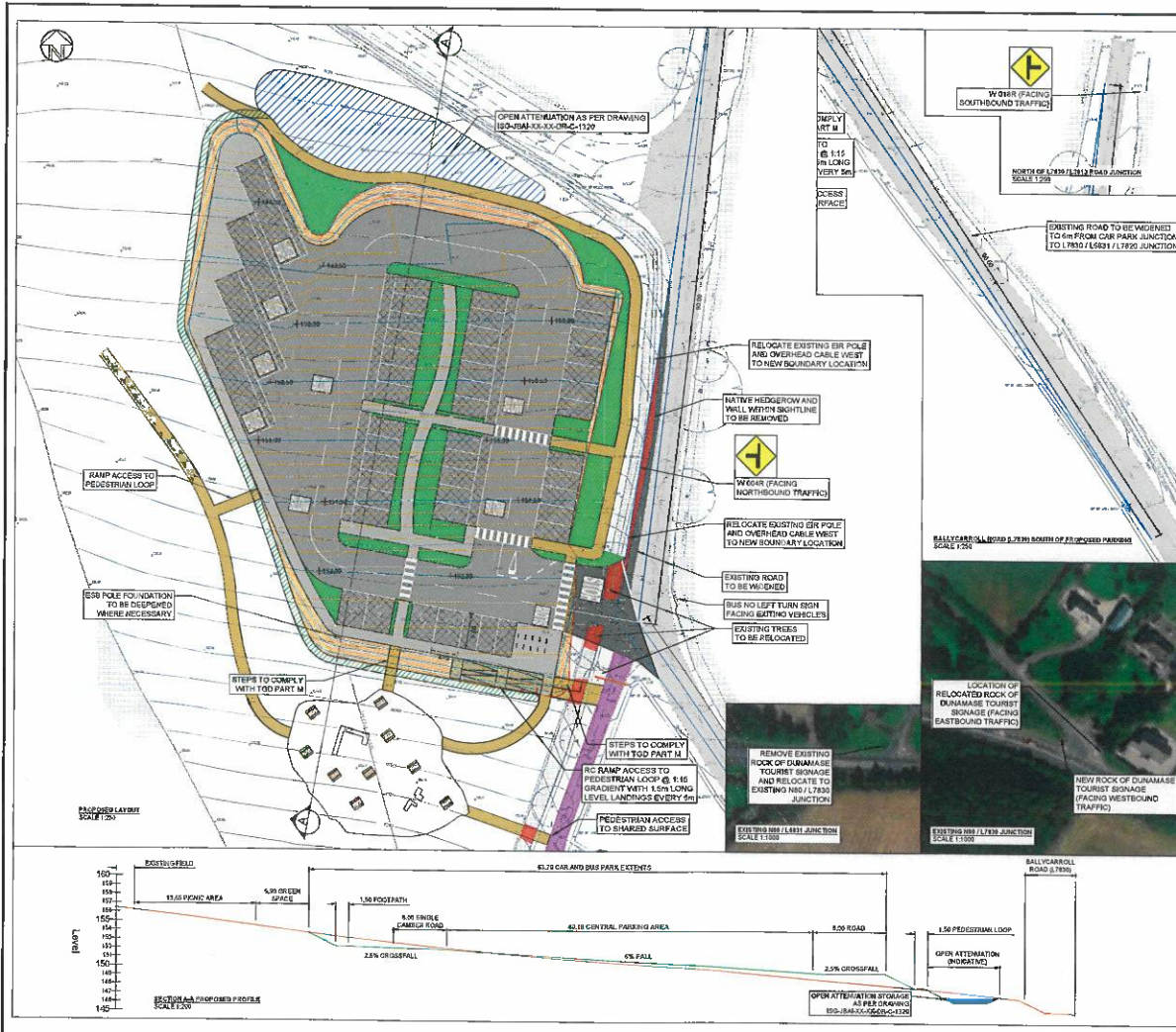
## APPENDIX A

### List of Drawings Examined

The following drawings have been provided electronically in PDF format by Laois County Council:

| Drawing number           | Rev | Drawing title           |
|--------------------------|-----|-------------------------|
| ISG-JBAI-XX-XX-DR-C-1310 | P02 | Proposed Parking Layout |
| ISG-JBAI-XX-XX-DR-C-1311 | P02 | Swept Path Analysis     |





|     |                  |             |                 |
|-----|------------------|-------------|-----------------|
| No. | Concurrence Date | Member Name | Designated Role |
| 1   |                  |             |                 |
| 2   |                  |             |                 |

In addition to the information normally contained within the terms of any contract on this drawing, please read the notes below.

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**  
BOX

**NOTES**

- ALL DIMENSIONS SHOWN ARE IN METRES UNLESS OTHERWISE STATED AND LEVELS IN METRES TO CEILING FINISH.
- DO NOT SCALE FROM THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED AGAINST THE DRAWING.
- ANY DIMENSIONS NOT SET OUT HEREIN ARE TO BE SUPPORTED BY THE ENGINEER IMMEDIATELY.
- THE LOCATION OF ANY DIMENSIONS SHOWN ON THE DRAWING ARE APPROXIMATE AND FOR GUIDANCE ONLY. THE CONTRACTOR WILL CONFIRM THE LOCATION OF ANY DIMENSIONS FROM THE COMMENCEMENT OF ANY WORKS.
- ALL DIMENSIONS OF THE DRAWING SHALL BE CHECKED FOR SETTING OUT.
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**LEGEND**

- PROPOSED ROAD SURFACE
- PROPOSED ACCESS DRIVE WITHIN PARKING AREA
- PROPOSED PEDESTRIAN LOOP
- PROPOSED PAVEMENT PAVING TO CONDUIT
- PROPOSED SHARED DRIVEWAY
- NATIVE HEDGEROW TO BE RELOCATED
- PROPOSED PLANTING AREA
- PROPOSED OPEN ATTENUATION
- PROPOSED PERIMETER CHISEL
- MIN SETBACK WITHIN SETBACK BASED ON LAOIS COUNTY COUNCIL ROADS AND PARKING STANDARDS
- PROPOSED SIGNAGE
- PROPOSED CONTROLS AT 5m INTERVALS
- PROPOSED CONTROL POINTS AT INTERVALS
- PROPOSED SPOT LEVEL
- PROPOSED FINISH LEVEL
- EXISTING GROUND LEVEL

|     |          |    |      |         |       |       |            |    |         |     |          |     |
|-----|----------|----|------|---------|-------|-------|------------|----|---------|-----|----------|-----|
| Rev | Comments | By | Date | Checked | Scale | Drawn | Discipline | FR | Checked | MCO | Approved | MCO |
| 1   | Initial  |    |      |         |       |       |            |    |         |     |          |     |
| 2   | Revised  |    |      |         |       |       |            |    |         |     |          |     |
| 3   | Revised  |    |      |         |       |       |            |    |         |     |          |     |
| 4   | Revised  |    |      |         |       |       |            |    |         |     |          |     |
| 5   | Revised  |    |      |         |       |       |            |    |         |     |          |     |
| 6   | Revised  |    |      |         |       |       |            |    |         |     |          |     |
| 7   | Revised  |    |      |         |       |       |            |    |         |     |          |     |
| 8   | Revised  |    |      |         |       |       |            |    |         |     |          |     |
| 9   | Revised  |    |      |         |       |       |            |    |         |     |          |     |
| 10  | Revised  |    |      |         |       |       |            |    |         |     |          |     |

Client Approval:

A - Approved  
B - Review with Revisions  
C - On Hold

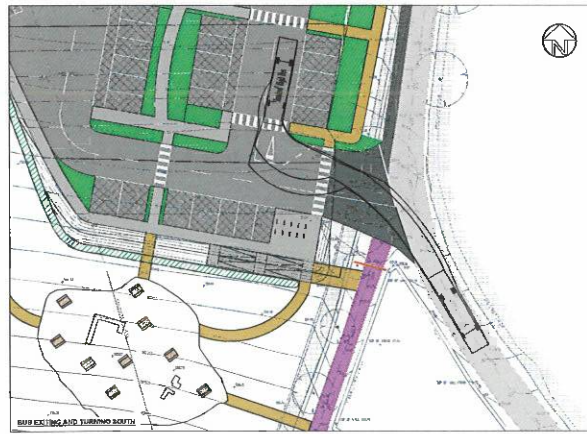
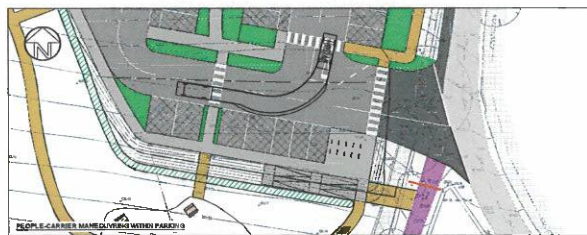
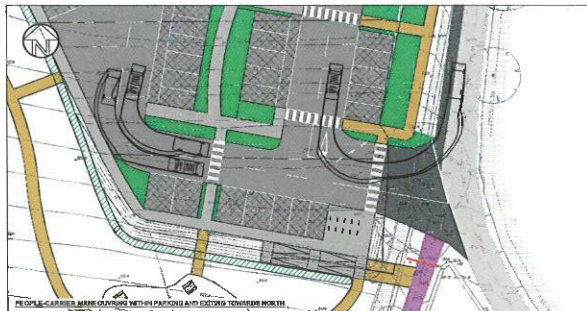
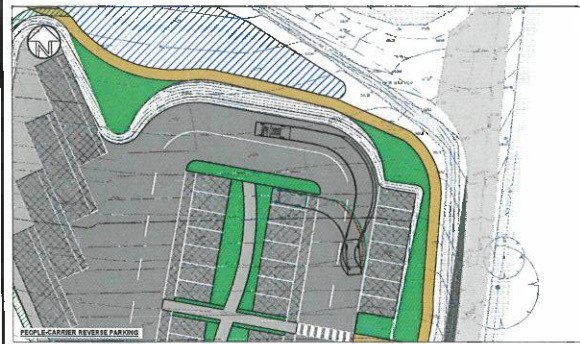
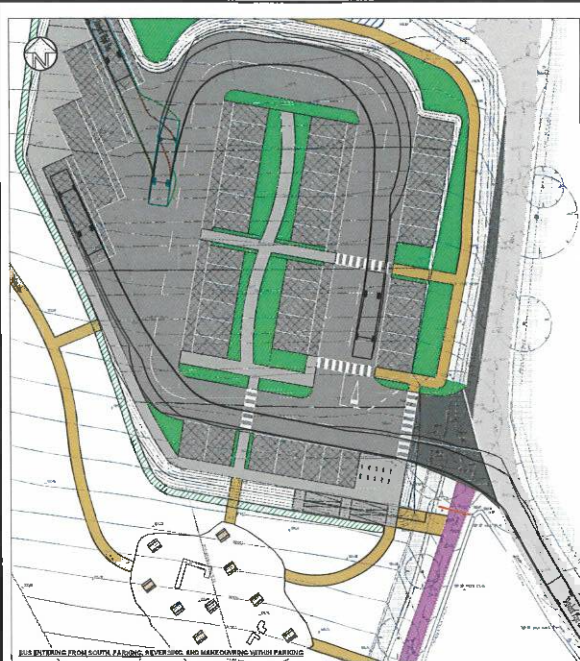
Project: **ROCK OF DUNAMASE CAR PARK**

Title: **PROPOSED PARKING LAYOUT**

Client: **LAOIS COUNTY COUNCIL**

|                   |                  |            |               |             |            |
|-------------------|------------------|------------|---------------|-------------|------------|
| Drawn             | FR               | 2023/02/22 | Checked       | FR          | 2023/02/22 |
| Checked           | MCO              | 2023/02/22 | Approved      | MCO         | 2023/02/22 |
| Project Reference | 2023/0168/150    | Scale      | AS SHOWN @ A1 | Drawn       | FR         |
| Drawing Number    | 2023/0168/150-01 | Sheet      | 1             | Number      | 1          |
| Client Code       | 2023/0168/150-01 | Discipline | S1            | Project     | FR         |
|                   |                  |            |               | Client Code | A1         |





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|---|--|--|--|
| 1 |  |  |  |
| 2 |  |  |  |

| No.   | Contribution Risk | Mitigation Plans | Residual Risk |
|---|-------------------|------------------|---------------|
| In addition to the hazards listed normally associated with the type of work detailed on this drawing the following are also identified: |                   |                  |               |

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX**

**DISCLAIMERS**

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- THE ELECTRIC VERSION OF THIS DRAWING IS NOT TO BE USED FOR SETTING OUT.

**LEGEND**

- PROPOSED ROAD SURFACE
- PROPOSED ACCESS WITHIN PARKING
- PROPOSED PERMEABLE PAVING
- PROPOSED SWALE
- PROPOSED SHARED SURFACE
- EXISTING CARRIAGEWAY
- PROPOSED PLANTING AREA
- PROPOSED BARRIER

**WATER TRACES**

- WATER TRACES
- SCOPED OVERLAP

| Rev. | Date     | Drawn | PE  | Checked | PE  | Checked | MD | Approved | MD |
|------|----------|-------|---|---------|---|---------|----|----------|----|
| 1    | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |
| 2    | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |
| 3    | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |
| 4    | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |
| 5    | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |
| 6    | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |
| 7    | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |
| 8    | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |
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| 10   | 09/11/23 | Drawn | PE <td>Checked</td> <td>PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> </td> | Checked | PE <td>Checked</td> <td>MD</td> <td>Approved</td> <td>MD</td> | Checked | MD | Approved | MD |

**Client Approval**

A - Approved  
B - Approved with Revision  
C - On Review

30 Day Valid  
Limited  
Project  
1/18/2024

JBA

**Project**  
**ROCK OF DUNAMASE CAR PARK**

**Title**  
**SWEEP PATH ANALYSIS**

**Client**  
**LAOIS COUNTY COUNCIL**

For the purpose of approval of this drawing, the Engineer, JBA, and the Client, Laois County Council, warrant that the drawing is a true and correct copy of the original drawing as submitted to the Engineer for approval and that the drawing is a true and correct copy of the original drawing as submitted to the Engineer for approval.

**Drawn:** PE    **Date:** 22/07/2023    **Design:** PE    **Date:** 22/07/2023  
**Checked:** MD    **Date:** 13/07/2023    **Approved:** MD    **Date:** 13/07/2023  
**Project Reference:** 20220918 / B19    **Scale:** 1:250 @ A1

**Drawn/Checked:** PE/MD    **Date:** 09/11/23    **Revision:** 01    **Sheet No:** A1



