Federal Court of Australia

District Registry: New South Wales

Division: General

No NSD 1484 of 2025

On appeal from the Federal Court of Australia

Dyno Nobel Asia Pacific Pty Ltd ACN 003 269 010

Appellant/Cross-Respondent

Orica Explosives Technology Pty Ltd ACN 075 659 353 and others

Respondents/Cross-Appellant

DYNO NOBEL'S OUTLINE OF SUBMISSIONS IN ANSWER

[redacted]

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A. INTRODUCTION

1. The primary judge found that the use of DNAP's products, the **CyberDet I Devices**, did not infringe **asserted claims** 1-4, 6, 8 9, 11, 13 and 15 of the 873 Patent: PJ [994]-[1033].

2. Orica appeals those findings by way of its Notice of Cross-Appeal and Contention dated 11 September 2025 (**NoCA**; Pt A Tab 19). DNAP submits that the primary judge's findings were correct and should be affirmed on the additional ground in its Notice of Cross-Contention dated 2 October 2025 (**NoCC**; Pt A Tab 20). These submissions respond to Orica's Submissions in Chief on the Notice of Cross-Appeal (**OSI**).

3. The infringement dispute between the parties on the 873 Patent is whether the CyberDet I system achieves selective control of wireless initiation devices using the claimed method. DNAP submits that her Honour was correct to find that the CyberDet I Devices operate in a fundamentally different way to the claimed method.

A.1 Ground 1 – claim 1 (NoCA [1])

4. Claim 1 is the only independent claim. It is set out at PJ [821] (emphasis added):

> *A method for controlling a predetermined group of wireless initiation devices within a plurality of such devices at a blast site, which method comprises: [integer 1.1]*
>
> *transmitting to the plurality of wireless initiation devices a wireless command signal relating to some operation to be executed only by the predetermined group of wireless initiation devices; [integer 1.2]*
>
> ***for each wireless initiation device receiving the wireless command signal, determining whether the wireless initiation device forms part of the predetermined group****; and [integer 1.3]*
>
> ***for each wireless initiating device that determines that it forms part of the predetermined group****, executing the operation on the basis of the command signal. [integer 1.4]*

5. Orica does not dispute her Honour's findings at PJ [1000]-[1006] as to how the CyberDet I system operates. In short:

[redacted]

[redacted]

6. Her Honour correctly found that the CyberDet I system does not satisfy integer 1.3: ***for each wireless initiation device receiving the wireless command signal, determining whether the wireless initiation device forms part of the predetermined group.***

7. The primary judge recorded at PJ [995] that Orica's infringement case at first instance was put in two ways (emphasis added):

> *(1) Orica's formal infringement case, as articulated in its Position Statement on Infringement and in Confidential Annexure BEP-8 to Papillon 1, was that* ***the relevant information included in wireless command signals transmitted to CyberDet I Devices, which those CyberDet I Devices each use to determine whether they are part of the predetermined group, was*** [redacted]*;*
>
> *(2) Orica's informal infringement case, as opened by Orica and to which DNAP raised no objection, is that the* ***relevant information included in wireless command signals transmitted to CyberDet I Devices, which it contends those CyberDet I Devices each use to determine whether they are part of the predetermined group, is the*** [redacted]***.***

8. Orica does not challenge PJ [995] in the NoCA or otherwise suggest that it is inaccurate.

9. The case now articulated by Orica in OSI materially departs from PJ [995]. At OSI [6], Orica asserts that her Honour erred in finding at PJ [1017] that the claimed determination step was not undertaken "*on the basis of information included in the wireless command signal*" because this involved "*erroneously introduc[ing] limitations*" not in claim 1. Orica asserts that "*it forms no part of claim 1 that the determination process must rely on information contained in the wireless command signal. The primary judge held at PJ [865] that claim 1 only requires that the device know that it is intended to execute the intended operation. By successfully* [redacted] *the* [redacted] *commands, the predetermined group of CyberDet I Devices met this criterion*". This is inconsistent with both formulations of the case pursued by Orica below and is not now open to Orica (see *Coulton v Holcombe* (1986) 162 CLR 1 at 7; *Metwally v University of Wollongong* (1985) 60 ALR 68 at 71). Had Orica pursued such a construction at first instance, DNAP may have run its invalidity case differently, including at least with respect to fair basis, sufficiency and lack of inventive step. DNAP would be prejudiced if Orica were now permitted to dramatically refashion its case in this manner.

10. If Orica's new case were open, DNAP submits that it would fail. Orica seeks to convert a method claim which, on its plain meaning, requires receipt of information and determination by the claimed devices, to a claim by result. That construction is contrary to the unchallenged finding at PJ [1007] that "*To be found to have infringed claim 1, it must be shown that there has been a transmission to, and receipt by, CyberDet I Devices of the wireless command signal (which I will call step 1) which CyberDet I Device then determines whether they form part of the predetermined group (step 2).*"

11. In support of this new case, OSI [6] relies on her Honour's finding at PJ [865] that "*there is no limitation as to the means by which the determination process is required to be performed in claim 1… the 'determination' step of the method of claim 1 only requires that the device know that it is intended to execute the intended operation*."

12. Orica misconstrues PJ [865]. Her Honour's finding was that the means (i.e., precise mechanism) for the determination being carried out by the claimed device is undefined in claim 1. That can be contrasted with claim 2 where the means of determination is specified. Her Honour was not seeking to read out from the claim the requirement that each wireless initiation device receive the wireless command signal and itself make a determination, as Orica does. This is apparent from the immediately preceding paragraph

PJ [864] in which her Honour extracted the following evidence of Mr Napier (relied on by Orica in its closing submissions at [24.17]) (Napier 2 [98]):

> *...each wireless initiation device receiving the wireless command signals, processing the information received and each device itself establishing whether that device forms part of the predetermined group.*

13. At OSI [9] Orica advances what appears to be an alternative argument, consistent with its "*informal*" infringement case at trial – that, in any event "[redacted], *transmitted with the command signal **is** used to* [redacted] *the signal and thereby allow devices in the predetermined group to execute the intended operation*." DNAP does not object to Orica running this case, which was correctly dismissed by Her Honour at PJ [1016] to [1018] (Cf OSI [10]).

14. Orica's submission fails to marry CyberDet I Devices with the requirements of the claim. Claim 1 requires the impugned device **itself** to determine whether it forms part of a predetermined group. This is reinforced by integer 1.4 which says "*for each wireless initiating device **that determines** that it forms part of the predetermined group…*". The CyberDet I Devices do not carry out any determination themselves – they either have the information required to [redacted] the message or they do not. This is illustrated at OSI [9] where Orica submit that the [redacted] is used to [redacted] the signal and "*thereby **allow***" devices in the predetermined group to execute the intended operation.

15. As her Honour found at PJ [1016], the determination step is not satisfied because "*selective control of CyberDet I Devices does not involve the inclusion of any information in the wireless command signal which the CyberDet I Devices use to determine if they are within a predetermined group … Rather, the* [redacted]". As her Honour went on to conclude, "[redacted]": PJ [1018].

16. Notwithstanding Orica's attempt to fit the CyberDet I devices within claim 1, the CyberDet I Devices operate on a different philosophy which is not contemplated by the 873 Patent. They achieve selection through [redacted]. Unlike claim 1, the

selection of a CyberDet I Device as part of a particular group occurs at a much earlier time (i.e., before the transmission of a wireless command signal relating to some operation to be executed) and is not undertaken by the CyberDet I Device itself. It occurs when the [redacted], the CyberDet I Devices intended to be fired within the same group (see 5(b) above). The 873 Patent does not contemplate this approach. The 873 Patent does contemplate the use of encryption but in a very different context: the communication of signals from a "*Central Command Station*" to blasting machines: 873 Patent p 5.18-20).

17. Claim 1 is not drafted in broad terms to allow any means to achieve selective control of wireless initiation devices. It requires the devices themselves to make a "determination". The CyberDet I devices do not make such determination. Ground 1 must fail.

A.2 Ground 2 – claim 2 (NoCA [2])

18. Claim 2 is set out at PJ [867] as follows (emphasis added):

> *The method of claim 1 [integer 2.1], wherein the* ***wireless command signal comprises a group identification component*** *that enables differentiation of wireless initiation devices forming part of the predetermined group from wireless initiating devices not forming part of the predetermined group, and wherein each wireless initiation device comprises: [integer 2.2]*
>
> *a receiver for receiving a wireless command signal; [integer 2.3]*
>
> *a memory component for storing a group identification; and [integer 2.4]*
>
> *a control circuit for* ***comparing the group identification component with a stored group identification,*** *for determining on the basis of that comparison whether the wireless initiation device forms part of the predetermined group, and for executing the intended operation of the wireless initiation device if it is determined that it forms part of the predetermined group. [integer 2.5]*

19. Her Honour found that claim 2 was not infringed for the same reasons as claim 1: PJ [1020]. Her Honour accepted that there is no requirement in claim 2 for the group identification component and the stored group identification to "match" (PJ [1023]) but observed that claim 2 requires a comparison between the group identification component with the stored group identification "*for determining on the basis of that comparison whether the wireless initiation device forms part of the predetermined group*" (PJ [1024]). Mr Jacobson's evidence, extracted at PJ [1025] was:

[redacted]

20. At PJ [1026] her Honour then correctly concluded (emphasis added):

> *Having regard to their respective roles as addressed above, the* [redacted] *is not compared to* [redacted]*. There is* ***no correlation*** *or matching between the two, nor identification of any similarities or differences* ***such that relevancy*** *can be determined. Rather, the* [redacted]

21. At OSI [15], Orica submits that the [redacted] is the group identification component and the stored group identification is the [redacted]. OSI [16] suggests that the [redacted] and [redacted] are "*compared*" in the sense that the [redacted] is "*complementary to*" the [redacted], the elements are "*mutually interdependent*", and the [redacted] "*correlates with"* the [redacted]. This ignores how the Cyber Det I Devices work. The [redacted] tells the device which part of the [redacted] to use to [redacted] a message. There is no correlation between the two.

22. Orica's approach does not reflect the definition of "*Group identification component*" which provides "*the group identification component may be different to the group identification component of the wireless devices to which it is targeted providing* ***the wireless devices can process the incoming group identification components to appropriately determine their relevancy***" (873 Patent p 7.4-7, emphasis added). OSI [14] acknowledges this definition and at [16] submits that a "*device can process the* [redacted] *by attempting to apply it to a* [redacted] *and thus determining its "relevancy" (PJ [882]). If the requisite* [redacted] *has been preloaded, the device will be able to* [redacted] *the signal and the* [redacted] *will have been relevant.*" This strained application of the words "*to appropriately determine their relevancy*" should be rejected.

A.3 Ground 3 – claim 4 (NoCA [3])

23. Claim 4 depends on claim 2 and adds the requirement that the wireless initiation devices within the same group have same stored group identification and wireless initiation devices within different groups have different stored group identification with the group

identification component of the wireless command signal "*corresponding*" to one of those stored group identifications.

24. Her Honour found that claim 4 was not infringed for the same reasons as claims 1 and 2: PJ [1028]. Further, her Honour found at PJ [1029] "*For the reasons set out above, I do not consider that the* [redacted] *would ever "correspond" to the* [redacted]*, as it could not be 'similar or analogous to', applying the ordinary meaning of 'correspond': Oxford English Dictionary online".*

25. Orica submits that it was not open to her Honour to make that finding because DNAP's case at trial was confined to reliance on the non-infringement argument with respect to claim 2: OSI [19]. However, there was nothing wrong in her Honour's factual finding in circumstances where, by virtue of claim 4 being dependent on claim 2, "*corresponding*" is an example of the comparison required in claim 2.

26. OSI [20]-[21] refers to other definitions of "*correspond*" and repeats the argument advanced in relation to claim 2 – the [redacted] and [redacted] "*correspond"* because they are "*complementary to each other and mutually interdependent*". The [redacted] does not correspond to the [redacted]: it is applied to it. Likewise, the [redacted] and [redacted] do not, as Orica assert, "*answer to each other in function*". They have independent functions: one is used by the other. It is not relevant that, as Orica submits, "*one is only useful in the context of the other".* Those words do not appear in any asserted definition of "*correspond".* If that submission were correct, all independent functions in a system would "*correspond*". In any event, the CyberDet I Devices do not possess the features of claims 1 or 2. This point goes nowhere and Ground 3 must also fail.

A.4 Ground 4 – claims 3, 6, 8, 9 11, 13 and 15 (NoCA [4])

27. Her Honour found the balance of the claims were not infringed for the same reasons as for claims 1 and 2: PJ [1031]-[1032]. It follows that Ground 4 must also fail for the reasons articulated above.

A.5 Ground 5 – identified DNAP blasts (NoCA [5])

28. OSI [26] submits that her Honour erred in failing to find that blasts identified OSI [24] used the methods of claims 1 to 4, 6, 8, 9, 11, 13 and 15 of the 873 Patent. This ground follows Grounds 1 to 4 above and must also fail.

A.6 Ground 6 – costs (NoCA [6])

29. Orica was wholly unsuccessful in its infringement allegations with respect to the 873 Patent. There is no reason why DNAP should be liable for Orica's costs.

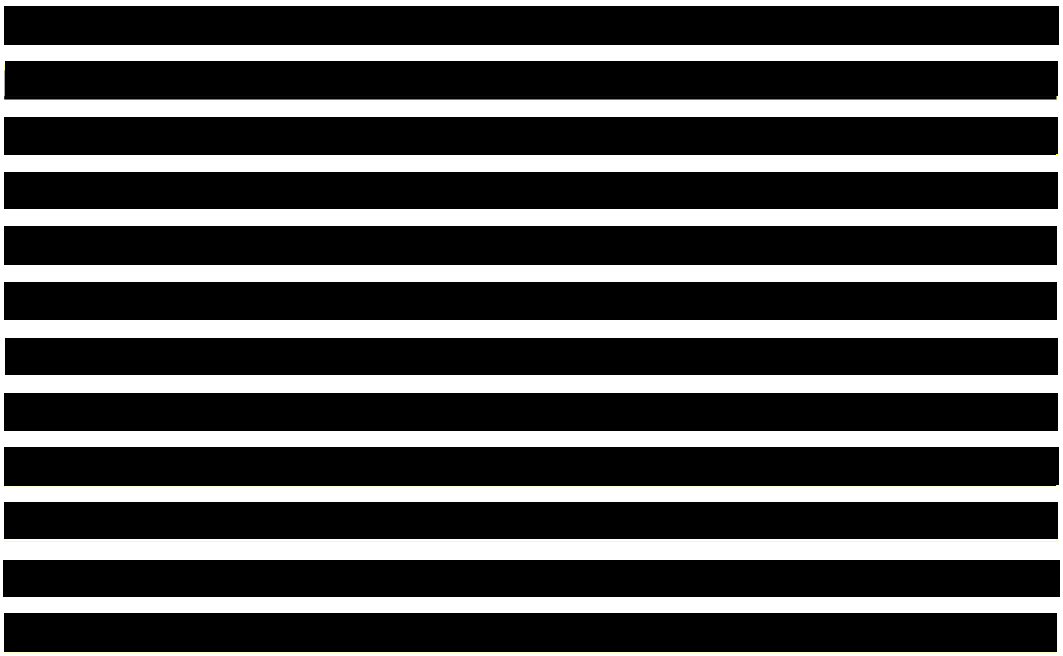
A.7 DNAP's cross-contention (NoCC [1])

30. DNAP argued at trial that, should Orica's construction be adopted, the Asserted Claims were not infringed by certain blasts because CyberDet I Devices within the transmission range of the blast control unit but at different locations on the same level or different levels of the mine, do not form "*a plurality of such devices at a blast site*" as required by claim 1. This additional argument applies to the allegedly infringing blasts identified in Napier 3, Conf Ann AN-51 [84].

31. Her Honour's consideration of this argument in the PJ is limited to three paragraphs (PJ [1013] to [1015]) in which her Honour concluded that "*It follows that the 'plurality' referred to in claim 1 can be comprised of any CyberDet I Devices that are loaded in blastholes and are in communication range of the BCU at the time that the relevant wireless command signal is sent*".

32. This conclusion did not take into account the evidence in Napier 3, Conf Ann AN-51 [81]-[84] on the construction of the term "*blast site*", relied on by DNAP in its closing submissions at DCS5 [84]. At PJ [859], her Honour construed "*blast site*" in claim 1 with reference to the evidence and Napier 1 and Napier 2 but not Napier 3.

33. Mr Napier's evidence in Napier 3, Conf Ann AN-51 [82] was:



[redacted]

34. Mr Napier's evidence is consistent with the 873 Patent. The examples and their corresponding figures emphasise the advantage of the selective control system being the ability to precisely control how a blast occurs in a localised area. For example:

    (a) Example 2 (figure 1) shows surface blasting of an area divided into adjacent four sections with the invention allowing the blasting to occur in stages.

    (b) Example 4 (figure 2a) illustrates ring blasting in which blast holes are arranged in a ring and a central cavity is used to receive dislodged fragments from the localised blasts.

    (c) Example 6 (figure 4) shows "half-face sinking" where a shaft is blasted in two halves next to each other in a coordinated fashion so that there is a free-face on at least one side of the shaft as it is sunk in stages.

35. The 873 Patent does not contemplate a "*blast site*" involving unrelated areas. The blasts identified by Mr Napier did not infringe on this additional basis.

B. CONCLUSION

36. Grounds 1-6 of Orica's NoCA should be dismissed and her Honour's finding of non-infringement upheld, including on the basis in NoCC [1].

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