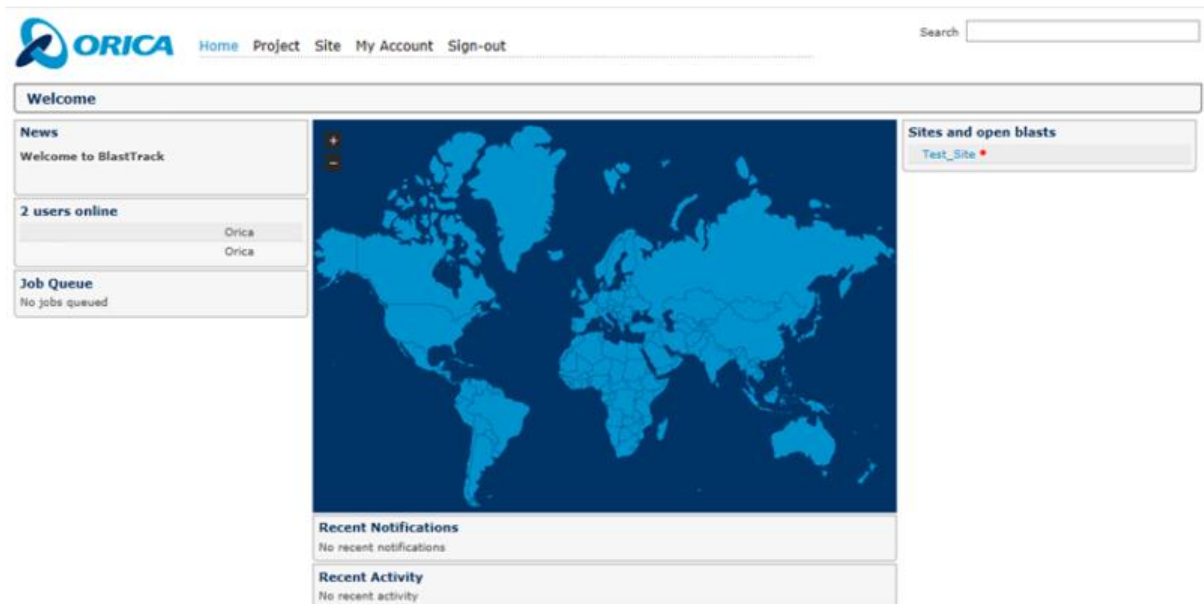




BLASTIQ

OPERATING MANUAL



© Copyright Orica Limited Group 2017

All Rights Reserved

No part of this document or its associated training materials may be reproduced or communicated in any form without the express, written permission of Orica Limited Group.

This prohibition applies to any means or media including but not limited to, digital or photographic reproduction, photocopying, copying by hand, scanning, electronic reproduction or transmission by facsimile, email, internet or intranet site etc.

Furthermore, the content, format, processes and procedures described or depicted in this document or its associated training materials must not be used by any party (including contractors), for any purpose other than that for which it was created, except with the express, written permission of Orica Limited Group.

DOCUMENT CONTROL

DOCUMENT NO.: ORICA-EXP-BIQ-001

PREPARED BY: Scott Feeney
Technical Officer
Projects & Technology

Rachel Purdie
Graduate Engineer
Projects & Technology

CHECKED BY: Austin Turner
BlastIQ Technical Lead
Projects & Technology

THIS PAGE IS INTENTIONALLY LEFT BLANK

LIST OF REVISIONS

Revision	Summary of Revision Content	Date	By Whom
O	Original Issue - BlastIQ Build 1.16	08/2015	S Feeney
A	Second Issue - BlastIQ Build 1.19	12/2015	S Feeney
B			
C			
D			
E			
F			
G			
H			
I			
J			
K			
L			
M			

Section Revisions		Date	Rev
Section 1	General Overview	08/2015	0
Section 2	BlastIQ Software Initialisation	08/2015	0
Section 3	BlastIQ Roles Defined	08/2015	0
Section 4	Using BlastIQ as a Viewer	08/2015	0
Section 5	Using BlastIQ as a Contributor	08/2015	0
Section 6	Using BlastIQ as an Editor	08/2015	0
Section 7	Using BlastIQ as a Site Manager	08/2015	0
Section 8	Installing SHOTPlus 5	08/2015	0
Section 9	Using SHOTPlus 5 with BlastIQ	08/2015	0
Section 10	Blaster's Desktop	08/2015	0

The document user is encouraged to improve the accuracy and currency of this document.

If this manual does not accurately reflect the current configuration / practices of this software suite, the document user is to contact the BlastIQ Technical Lead to arrange for the documentation to be updated by the Projects & Technology Technical Officer.

TABLE OF CONTENTS

DOCUMENT CONTROL.....	i
LIST OF REVISIONS	iii
TABLE OF CONTENTS.....	v
LIST OF FIGURES.....	viii
LIST OF TABLES	viii
MANUAL SYMBOLS	ix
1 GENERAL OVERVIEW	1-1
1.1 Overview	1-1
1.2 The Mining Cycle	1-2
2 BLASTIQ SOFTWARE INITIALISATION	2-1
2.1 Overview	2-1
2.2 Initial Access of BlastIQ For Customers	2-1
2.3 Initial Access of BlastIQ For Orica Staff	2-7
3 BLASTIQ ROLES DEFINED	3-1
3.1 Overview	3-1
3.2 BlastIQ User Role Permissions	3-1
4 USING BLASTIQ AS A VIEWER	4-1
4.1 Overview	4-1
4.2 Viewing Site Information	4-1
4.3 The Site Overview	4-2
4.3.1 Viewing Details of Transferred Files	4-3
4.4 Viewing the Site Map	4-4
4.5 Viewing the Site Blasts	4-7
4.5.1 Individual Blast Information.....	4-11
4.6 Viewing the Site Performance	4-17
4.7 Viewing the Site Documents.....	4-24
4.8 Viewing the Site Images	4-26
4.9 Viewing the Site Videos	4-27
5 USING BLASTIQ AS A CONTRIBUTOR	5-1
5.1 Overview	5-1
5.2 Uploading Documents and Files	5-1
5.2.1 Uploading a Document from the Overview Tab	5-1
5.2.2 Uploading a File from the Overview Tab	5-4
5.3 Uploading a File in Documents.....	5-6

6	USING BLASTIQ AS AN EDITOR	6-1
6.1	Overview	6-1
6.2	Editing Site Information	6-1
6.3	Creating and Editing Points of Interest	6-2
6.3.1	Uploading Points of Interest from a SHOTPlus5™ File	6-3
6.3.2	Creating Points of Interest in BlastIQ	6-8
6.3.3	Configuring Environmental Monitors	6-11
6.4	Creating New Blasts	6-15
6.5	Editing the Blast Details	6-18
6.5.1	Details	6-18
6.5.2	Name	6-19
6.5.3	Notes	6-20
6.6	Upload SHOTPlus 5 File	6-21
6.7	Edit Blast Properties	6-24
6.8	Recording Blast Measures	6-26
6.8.1	Blast measures	6-27
6.8.2	Environmental measures	6-27
6.9	Completing the Job Pack	6-28
6.9.1	Marking Items as Complete	6-29
6.9.2	Adding Comments to Job Pack Fields	6-30
6.9.3	Job Pack File Uploads	6-31
6.10	Using the Documents Manager	6-32
6.10.1	New Folder Creation	6-33
6.10.2	Folder Relocation	6-34
6.10.3	Rename Folder	6-35
6.10.4	Folder Deletion	6-36
6.10.5	Uploading a File using Documents Manager	6-37
6.10.6	Download a File using Documents Manager	6-39
6.10.7	Move a File using Documents Manager	6-40
6.10.8	Delete a File using Documents Manager	6-41
6.10.9	Make a File Confidential using Documents Manager	6-42
6.11	Using the Images Library	6-43
6.12	Using the Videos Library	6-44
6.13	Marking Blasts as Closed	6-47
6.13.1	To Reopen a Blast once it has been Closed	6-48
7	USING BLASTIQ AS A SITE MANAGER	7-1
7.1	Overview	7-1
7.2	General Site Configuration	7-2
7.2.1	Adding Site Members	7-3
7.2.2	Optional Features	7-5
7.2.3	Confidential blast information	7-7
7.2.4	Blast Type Descriptors	7-9
7.2.5	Blast Measures	7-14
7.2.6	Settings	7-18
7.3	Creating a Job Pack Definition	7-20
7.3.1	Configuring to Upload a Job Pack Item from File	7-23
7.3.2	Configuring to Manually Enter a Job Pack Item	7-24
7.4	Configuring Site Map	7-25
7.4.1	Define Site Map Coordinate System	7-25
7.4.2	Uploading a Map Overlay	7-28
7.4.3	Select a Default Site Map View	7-31

7.5	Setting up LOADPlus Connection	7-34
7.6	Adding News Articles to Site Page	7-36
8	INSTALLING SHOTPLUS 5	8-1
8.1	Overview	8-1
8.2	SHOTPlus 5 Licence Key	8-1
8.3	FIRST TIME USING SHOTPlus 5	8-6
8.4	Installing SHOTPlus 5 Updates	8-18
9	USING SHOTPLUS 5 WITH BLASTIQ	9-1
9.1	Overview	9-1
9.2	Connecting to BlastIQ Using SHOTPlus 5	9-1
9.2.1	Connecting to BlastIQ at SHOTPlus 5 Startup	9-1
9.2.2	Connecting to BlastIQ When SHOTPlus 5 is In-use	9-3
9.3	Creating a New BlastIQ Blast File Using SHOTPlus 5	9-11
9.4	Managing Design Versions Using BlastIQ	9-15
9.4.1	Hole States	9-15
9.4.2	Blast States	9-15
9.5	Accessing previous versions from BlastIQ	9-16
9.5.1	Downloading a Previous SHOTPlus 5 File	9-19
9.5.2	Reverting to a Previous SHOTPlus 5 File	9-21
10	BLASTER'S DESKTOP	10-1
10.1	Overview	10-1
10.2	Installing Blaster's Desktop for orica users	10-1
10.3	Installing SHOTPlus 5 Using Blaster's Desktop FOr orica users	10-5
10.4	Running SHOTPLUS 5 for the first time	10-12
10.5	Installing Beta Software for Testing	10-14
10.6	To open the Beta Version	10-21

LIST OF FIGURES

Figure 1-1: BlastIQ system flowchart	1-1
Figure 1-2: Technologies used during the mining cycle	1-2

LIST OF TABLES

Table 3-1: BlastIQ Online User Role Permissions	3-1
---	-----

MANUAL SYMBOLS

The following symbols may appear in this manual. They are used to alert the reader to potential safety issues or references to external documents.



Reference to an external electronic or hardcopy document.



Reference to qualification / training requirements.

NOTICE

To address practices not related to personal injury.

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury. WARNING signs should not be used for property damage hazards unless personal injury risk appropriate to this level is also involved.

DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury. DANGER signs should not be used for property damage hazards unless personal injury risk appropriate to these levels is also involved.

THIS PAGE IS INTENTIONALLY BLANK

1 GENERAL OVERVIEW

Section Revision: 0

Revision Date: August 2015

1.1 OVERVIEW

Orica's BlastIQ system is a combination of proprietary technologies that connect the Blasting Process from Design through to Reporting with a high degree of consistency, traceability and interoperability.

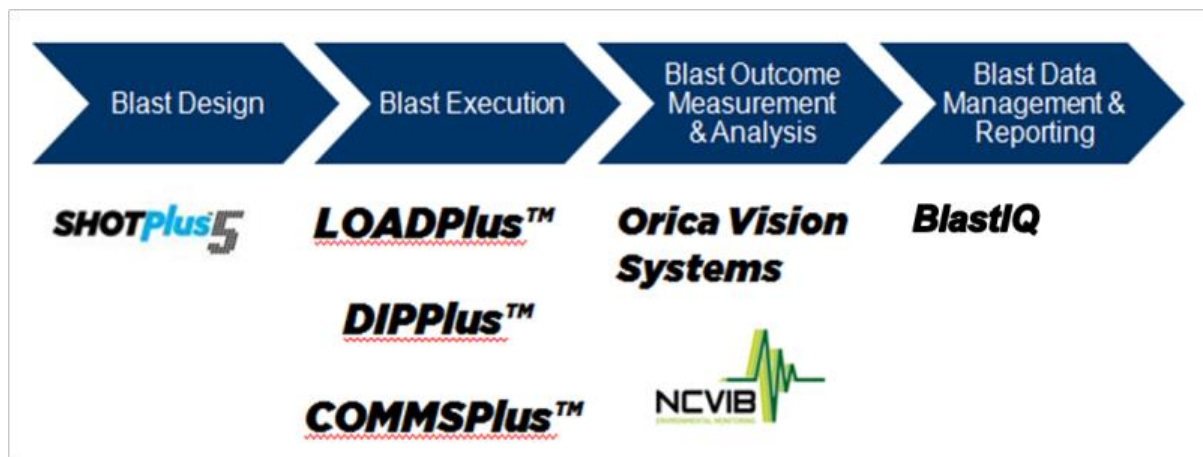


Figure 1-1: BlastIQ system flowchart

NOTICE

The BlastIQ system was initially developed as BlastTrack. Some parts of the system and some screenshots used in this Operating Manual may display the old naming convention.

1.2 THE MINING CYCLE

BlastIQ aligns with many aspects of the mining cycle.

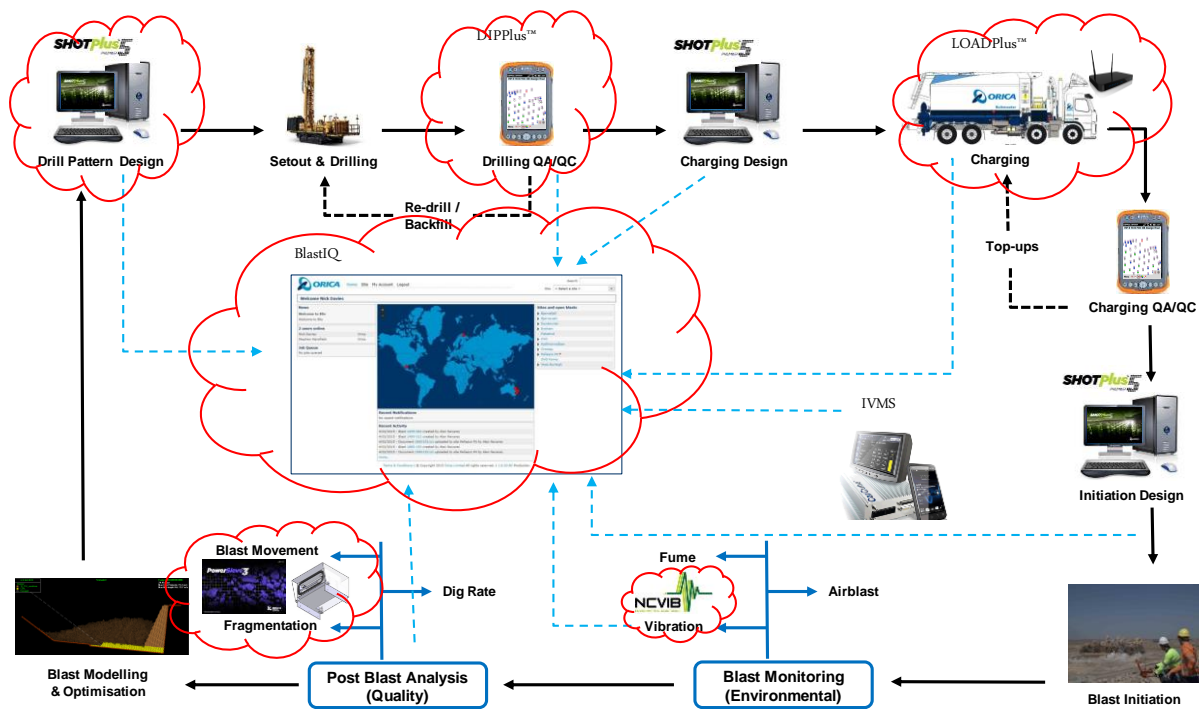


Figure 1-2: Technologies used during the mining cycle

2 BLASTIQ SOFTWARE INITIALISATION

Section Revision: 0

Revision Date: August 2015

2.1 OVERVIEW

This process is a one-off process for new users logging into BlastIQ for the first time.

2.2 INITIAL ACCESS OF BLASTIQ FOR CUSTOMERS

The following steps describe how to access BlastIQ for the first time.

You will receive a 'Welcome to BlastIQ' email. This email will contain a webpage link, your system username and an initial password.

1. Click on the website link provided in the email.

Hello Scott,

Welcome to BlastIQ.

1. Please visit us at <https://blastiq.orica.com>

2. Log in using

Your new **username**: scott.feeney@ext.orica.com

Your temporary **password**: 4: [REDACTED]K

3. You will need to choose your own password.

Please contact me if you would like any assistance or to provide feedback.

Thank you and we hope you enjoy using BlastIQ.

Regards,

Austin

BlastIQ Support Team

Field Information Systems | Orica Pty Ltd

Kurri Technical Centre, 1151 George Booth Drive, Kurri Kurri NSW 2327

✉ shotplus_support@orica.com

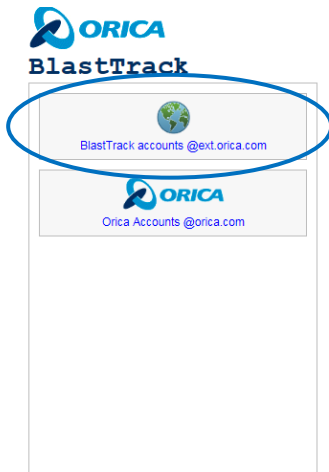
Orica | www.orica.com



The website provides access for Orica's customers and Orica's internal staff:

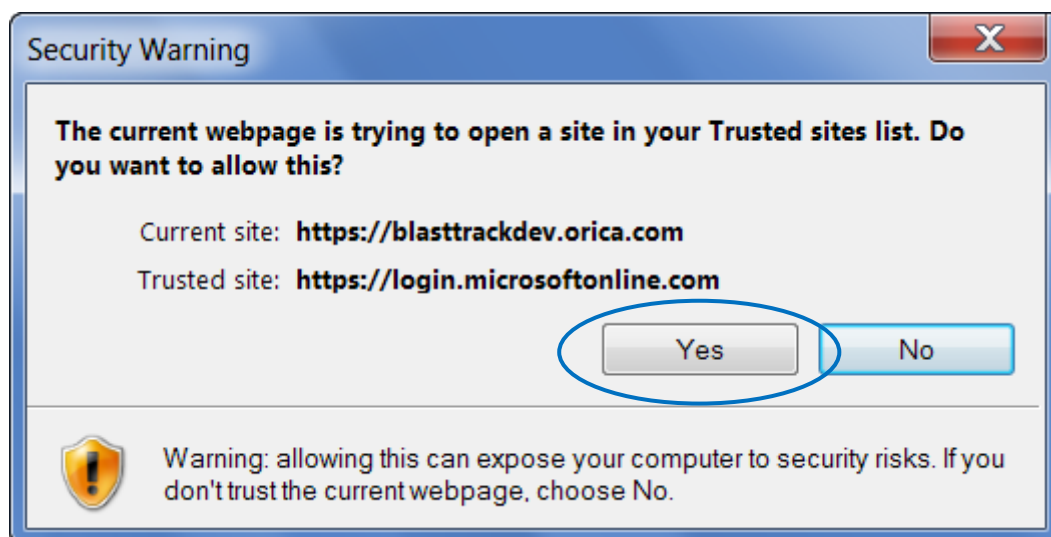
- The upper box provides external (customer) access.
- The lower provides internal (staff) access.

2. Select the **BlastTrack accounts @ext.orica.com** log-in box.



Depending upon your computer's security settings, you may receive a Security Warning.

3. Select **Yes**, if prompted.

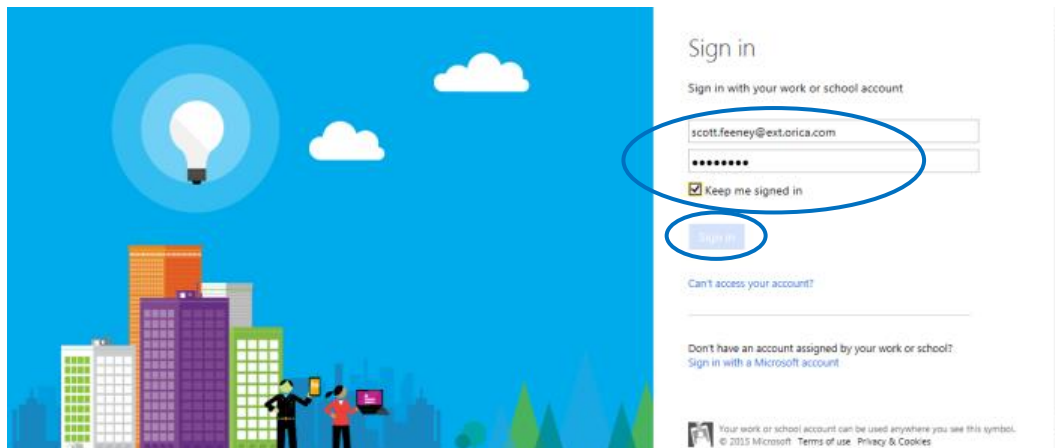


Orica uses Microsoft to manage the user authorisation for the BlastIQ system.

You will be redirected to a secure Microsoft webpage.

4. Enter the *username* and temporary *password* from the 'Welcome to BlastIQ' email.
5. Place a tick in the 'Keep me signed in' box.

6. Select **Sign in**.



External (customer) users will be prompted to update their passwords.

As stated on the screen, the password *must have at least 8 characters and can't contain your user ID. It must contain at least three of the following: uppercase letters, lowercase letters, numbers, and symbols.*

7. Enter your new, secure password. Remember to save it somewhere safe.

8. Select **Update password and sign in**.



The first time, users of BlastIQ will be presented with the system's *Terms and Conditions*.



Terms and Conditions

Disclaimer

This website is owned by Orica Limited (ABN 24 004 145 868) of 1 Nicholson Street, Melbourne, Victoria, 3000, Australia ("Orica"). The website is operated on behalf of Orica and its related bodies corporate and affiliates (collectively, "we" or "us").

Copyright Statement

1. All copyright in the website design, text, graphics, the selection and arrangement thereof, and all software relating to this website belongs to or is licensed by Orica. This copyright is protected by Australian and international copyright laws.
2. Subject to paragraph 3, no material from this website may be copied, reproduced, distributed, modified, uploaded, transmitted, reused, re-posted, published or framed within another website without Orica's prior written permission.
3. Orica grants you permission to download one copy of the material on this website in the usual course of operating your web browser, for your personal non-commercial use. You may also print hard copies of the material on this website for non-commercial use, provided you retain all copyright and other proprietary notices on that material.

Trade Mark Statement

All trade marks, service marks, trade names, branding and get-up (trade dress) on this website belong to Orica or its licensors. Orica does not give you any licence or right to use them.

Your Consumer Rights

You may have rights under applicable consumer protection legislation, such as the Australian Consumer Law, which cannot be excluded, restricted or modified by this Agreement ("Your Consumer Rights"). In Australia, Your Consumer Rights include that goods will be of acceptable quality and match their description and that services will be provided with care and skill. You can find out more about Your Consumer Rights from consumer organisations and bodies such as the Australian Competition and Consumer Commission and State/Territory fair trading authorities.

General Disclaimer

1. This website has been compiled by Orica on the basis of current general information. Changes in circumstances after publication may affect the completeness or accuracy of this information. To the maximum extent permitted by law, we disclaim all liability for any errors or omissions contained in this information or any failure to update or correct this information. You should independently assess and verify the accuracy, completeness and reliability of the information on this website, and to seek professional advice where necessary.
2. Nothing contained on this website is to be interpreted as a recommendation to use any product, process or formulation or any information on this website in a manner which infringes the intellectual property rights of any person, company or entity. Subject to Your Consumer Rights, we make no representations or warranties that use of the information on this website will not infringe such intellectual property rights.
3. Subject to Your Consumer Rights, we make no representation that the products displayed on this website are currently available or that their specifications are current and complete. Display of any product does not constitute an offer or undertaking by us.
4. Orica makes this website and its contents available on an "as is" basis. We are obliged to uphold Your Consumer Rights. We make no other representations or warranties of any kind with respect to this website or its contents. To the maximum extent permitted by law, we disclaim any such representations or warranties as to the completeness, accuracy, merchantability or fitness for purpose of this website, including without limitation the information on this website, products referred to on this website and any email correspondence between you and us.
5. Nothing contained on this website amounts to an invitation to deal in shares or other securities issued by us. Please seek independent professional advice before making a decision to invest in us.

9. Read the *Terms and Conditions*.

10. Scroll down to the bottom of the window using the Scroll Bar.

Two options are presented:

- **Agree** – you agree to use the software in the manner described in the *Terms and Conditions*.
- **Cancel** – you do not agree to use the software in the manner described in the *Terms and Conditions*. Access ceases here.

11. Select **Agree**.

We do not authorise you to (either yourself or through any third party): use any device, software, process or routine to interfere or attempt to interfere with the proper working of the website or any transaction or process being conducted on or through the website; take any action that imposes an unreasonable or disproportionately large load on the infrastructure of or bandwidth connecting to the website; take any action that could damage, disable, overburden, or impair the website or interfere with any other party's use and enjoyment of this website; transmit, distribute, introduce or otherwise make available in any manner through this website any computer virus, keyloggers, spyware, worms, Trojan horses, timebombs or other malicious or harmful programming; use this website in connection with requesting, harvesting, obtaining or storing any personal information, passwords, account information or other information about other users of this website; or use any data mining, robots, or similar data gathering and extracting tools in connection with this website.

Limitation of Liability

1. The use of the information on this website is at your own risk. Subject to paragraph 3, we, our directors, employees, shareholders, agents and other representatives will not, under any circumstances, be liable for any injury, loss or damage arising out of or related to the use, or inability to use, the information on this website or provided through this website by email.
2. Subject to paragraph 3, this limitation of liability includes, but is not limited to, compensatory, direct, indirect or consequential damages, loss of data, income or profit, loss of or damage to property and third party claims.
3. Where Your Consumer Rights apply, to the maximum extent permitted by law, our liability will, at our option, be limited to: resupplying goods or services to you or supplying equivalent goods; repairing the goods; or paying to have the goods or services resupplied or goods repaired.

Links

1. Orica permits linking to this website, provided that the full html page is loaded. Any such links must not incorporate our trade marks or service marks, and must not be used to disparage or otherwise detrimentally affect our reputation of Orica.
2. Information on this website may include links to the websites of others, including, without limitation, Orica share price information supplied by the Australian Stock Exchange. These links are provided for your convenience only. We do not endorse, guarantee or approve the content or accuracy of these websites, and does not recommend the products, services or information on these websites.
3. We do not warrant that information on any third party websites is free from computer viruses or any defects, errors or infringements of intellectual property rights, nor do we authorise any such infringement by providing these links.
4. We disclaim liability for any loss or damage whatsoever arising from your use of links to third party websites.

Unsolicited Ideas

It is our policy not to accept information from third parties which is confidential or proprietary. If you wish to retain the confidentiality of your material, do not submit it to us via email or otherwise without first obtaining our agreement.

Jurisdiction

1. The laws of the State of Victoria, Australia, apply to this Disclaimer.
2. If you access this website in a jurisdiction other than Victoria, Australia, you should consider whether your use complies with the laws of that jurisdiction, to the extent that they apply.
3. If the information on this website is translated into or presented in languages other than English, the English version of that information will be authoritative in relation to any disputes regarding its interpretation.

(Last updated: 1 July 2012)

You can contact system administration or request help via the following email address
ITServiceDesk@orica.com

The user is then presented with the BlastIQ home screen.

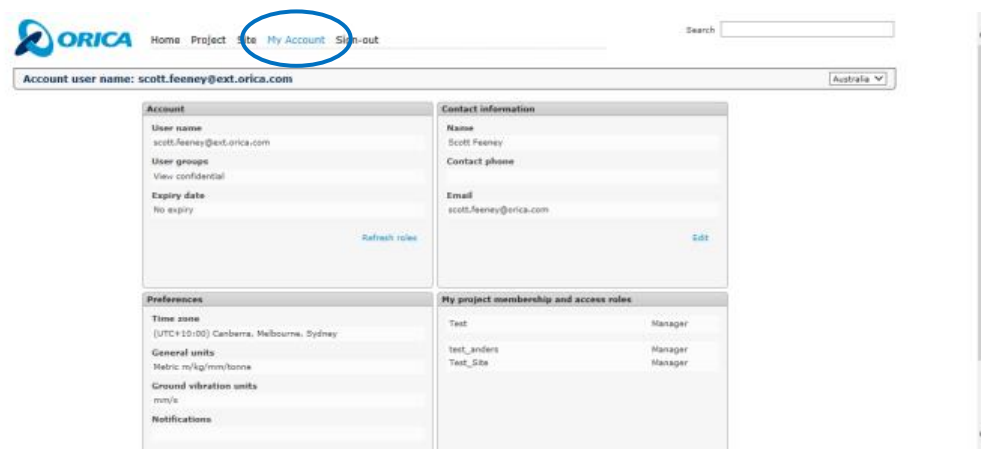
You may not be presented with any sites at this stage. Site access is requested from your local site administrator.



For help and support, please contact the Orica Global Service Desk:

For External users: email itservicedesk@orica.com

12. Select **My Account** to modify the user preferences.



13. Add new information:

- **Contact phone** number
- **General units**
- **Vibration units**

14. Select the **Time zone**.

15. Select required **Notifications**.

16. Select **Update** to save the new settings and information.

ORICA Home Project Site My Account Sign-out

Edit my account

Full name of user
Scott Feeney

Contact phone

General units
☒ m,mm,kg,tonne ☐ ft,in,lb,ton

Vibration units
☒ mm/s ☐ in/s

Time zone
(UTC+10:00) Canberra, Melbourne, Sydney

Notifications

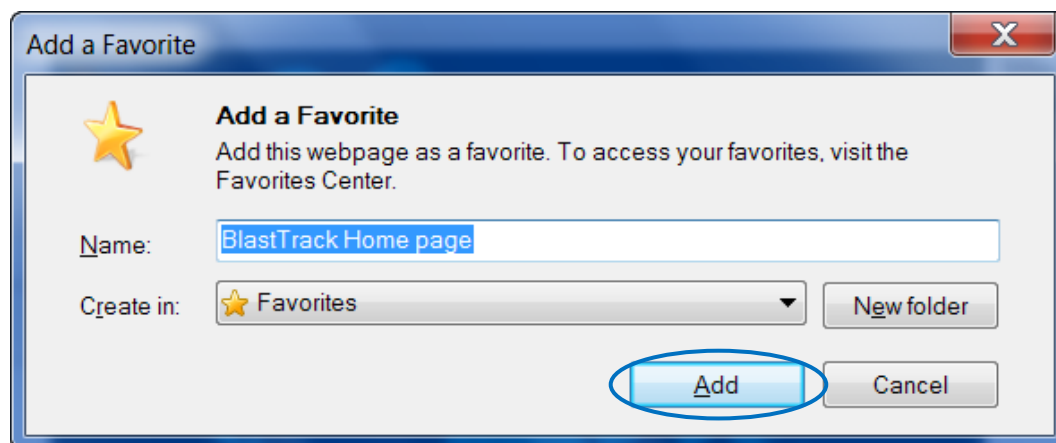
- ☐ Notify when document added
- ☐ Notify when new measurement added
- ☐ Notify when new blast created
- ☐ Notify when document dropdown updated
- ☐ Notify when job pack updated
- ☐ Notify project member added
- ☐ Notify project member removed
- ☐ Notify project member role changed
- ☐ Notify user given site access
- ☐ Notify user site access removed
- ☐ Notify user site access role changed
- ☐ Notify user created new site

Update Cancel

Terms & Conditions | © Copyright 2015 Orica Limited. All rights reserved. | Build 1.13

After the user preferences have been saved, please bookmark BlastIQ.

17. Select **Home** to return to the BlastIQ home page.
18. Select **[Ctrl] + [d]**.
19. If prompted with the following message, select **Add**.
Some browsers will add a bookmark without this message.



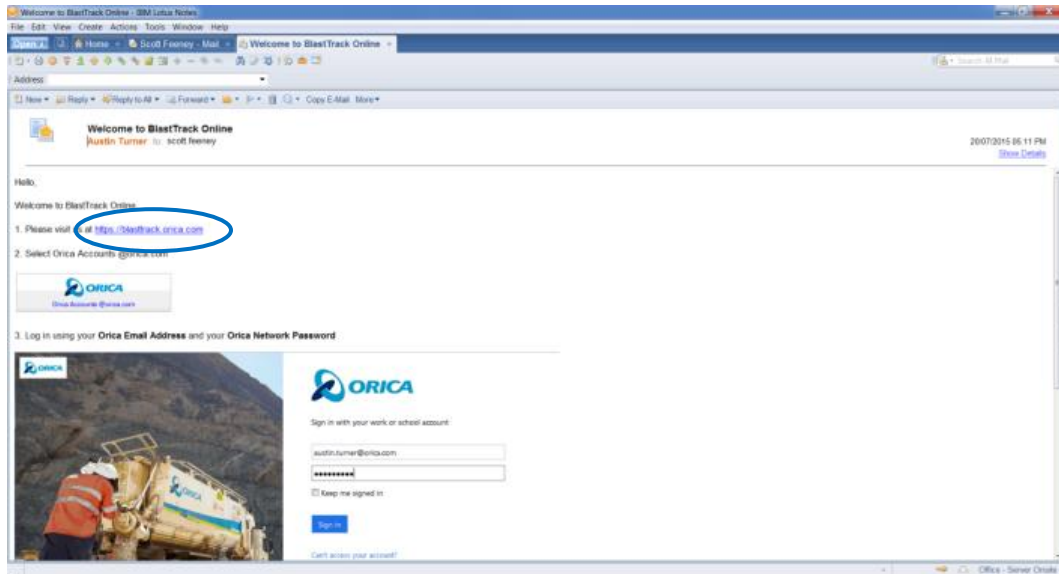
Future access to BlastIQ site can be performed via the bookmark created.

2.3 INITIAL ACCESS OF BLASTIQ FOR ORICA STAFF

The following steps describe how to access BlastIQ for the first time.

You will receive a 'Welcome to BlastIQ' email. This email will contain a webpage link and a brief version of these instructions.

1. Click on the website link (<https://blasttrack.orica.com>) provided in the email.



The website provides access for Orica's customers and Orica's internal staff:

- The upper box provides external (customer) access.
- The lower provides internal (staff) access.

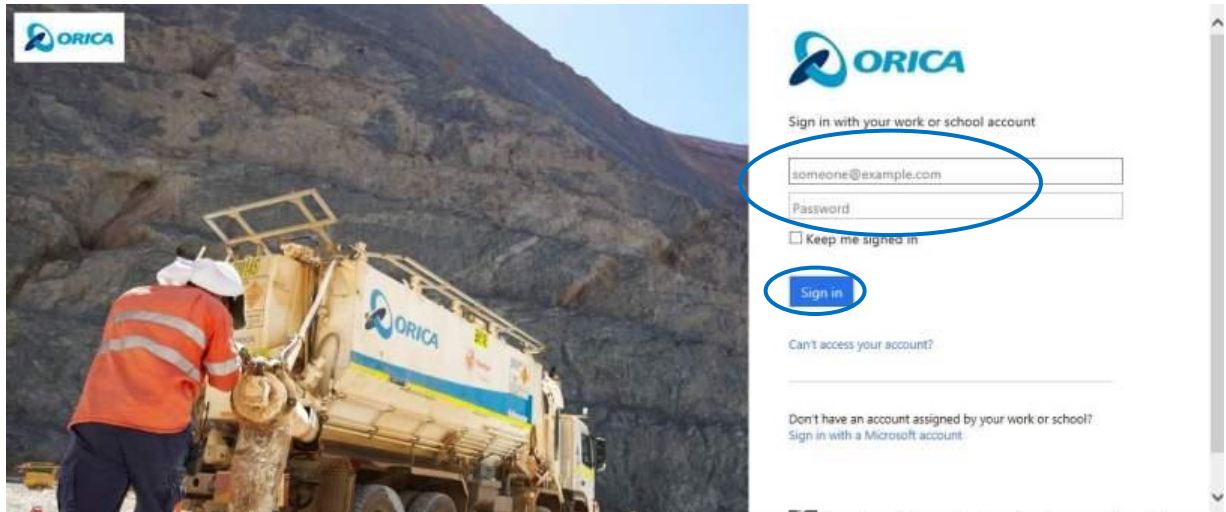
2. Select the **Orica Accounts @orica.com** log-in box.



Orica uses Microsoft to manage the user authorisation for the BlastIQ system.

You will be redirected to a secure Microsoft webpage.

3. Enter your standard Lotus Notes **email address**
4. In internet explorer on Orica computers, you may be automatically signed in without entering a password
5. On other browsers, non-Orica computers and mobile devices, enter your Orica **password**.
6. Select **Sign in**.



The first time, users of BlastIQ will be presented with the system's *Terms and Conditions*.



Terms and Conditions

Disclaimer

This website is owned by Orica Limited (ABN 24 004 145 868) of 1 Nicholson Street, Melbourne, Victoria, 3000, Australia ("Orica"). The website is operated on behalf of Orica and its related bodies corporate and affiliates (collectively, "we" or "us").

Copyright Statement

1. All copyright in the website design, text, graphics, the selection and arrangement thereof, and all software relating to this website belongs to or is licensed by Orica. This copyright is protected by Australian and international copyright laws.
2. Subject to paragraph 3, no material from this website may be copied, reproduced, distributed, modified, uploaded, transmitted, reused, re-posted, published or framed within another website without Orica's prior written permission.
3. Orica grants you permission to download one copy of the material on this website in the usual course of operating your web browser, for your personal non-commercial use. You may also print hard copies of the material on this website for non-commercial use, provided you retain all copyright and other proprietary notices on that material.

Trade Mark Statement

All trade marks, service marks, trade names, branding and get-up (trade dress) on this website belong to Orica or its licensors. Orica does not give you any licence or right to use them.

Your Consumer Rights

You may have rights under applicable consumer protection legislation, such as the Australian Consumer Law, which cannot be excluded, restricted or modified by this Agreement ("Your Consumer Rights"). In Australia, Your Consumer Rights include that goods will be of acceptable quality and match their description and that services will be provided with care and skill. You can find out more about Your Consumer Rights from consumer organisations and bodies such as the Australian Competition and Consumer Commission and State/Territory fair trading authorities.

General Disclaimer

1. This website has been compiled by Orica on the basis of current general information. Changes in circumstances after publication may affect the completeness or accuracy of this information. To the maximum extent permitted by law, we disclaim all liability for any errors or omissions contained in this information or any failure to update or correct this information. You should independently assess and verify the accuracy, completeness and reliability of the information on this website, and to seek professional advice where necessary.
2. Nothing contained on this website is to be interpreted as a recommendation to use any product, process or formulation or any information on this website in a manner which infringes the intellectual property rights of any person, company or entity. Subject to Your Consumer Rights, we make no representations or warranties that use of the information on this website will not infringe such intellectual property rights.
3. Subject to Your Consumer Rights, we make no representation that the products displayed on this website are currently available or that their specifications are current and complete. Display of any product does not constitute an offer or undertaking by us.
4. Orica makes this website and its contents available on an "as is" basis. We are obliged to uphold Your Consumer Rights. We make no other representations or warranties of any kind with respect to this website or its contents. To the maximum extent permitted by law, we disclaim any such representations or warranties as to the completeness, accuracy, merchantability or fitness for purpose of this website, including without limitation the information on this website, products referred to on this website and any email correspondence between you and us.
5. Nothing contained on this website amounts to an invitation to deal in shares or other securities issued by us. Please seek independent professional advice before making a decision to invest in us.

7. Read the *Terms and Conditions*.

8. Scroll down to the bottom of the window using the Scroll Bar.

Two options are presented:

- **Agree** – you agree to use the software in the manner described in the *Terms and Conditions*.
- **Cancel** – you do not agree to use the software in the manner described in the *Terms and Conditions*. Access ceases here.

9. Select **Agree**.

Legal Notices

We do not authorise you to (either yourself or through any third party): use any device, software, process or routine to interfere or attempt to interfere with the proper working of the website or any transaction or process being conducted on or through the website; take any action that imposes an unreasonable or disproportionately large load on the infrastructure of or bandwidth connecting to the website; take any action that could damage, disable, overburden, or impair the website or interfere with any other party's use and enjoyment of this website; transmit, distribute, introduce or otherwise make available in any manner through this website any computer virus, keyloggers, spyware, worms, Trojan horses, timebombs or other malicious or harmful programming; use this website in connection with requesting, harvesting, obtaining or storing any personal information, passwords, account information or other information about other users of this website; or use any data mining, robots, or similar data gathering and extracting tools in connection with this website.

Limitation of Liability

1. The use of the information on this website is at your own risk. Subject to paragraph 3, we, our directors, employees, shareholders, agents and other representatives will not, under any circumstances, be liable for any injury, loss or damage arising out of or related to the use, or inability to use, the information on this website or provided through this website by email.
2. Subject to paragraph 3, this limitation of liability includes, but is not limited to, compensatory, direct, indirect or consequential damages, loss of data, income or profit, loss of or damage to property and third party claims.
3. Where Your Consumer Rights apply, to the maximum extent permitted by law, our liability will, at our option, be limited to: resupplying goods or services to you or supplying equivalent goods; repairing the goods; or paying to have the goods or services resupplied or goods repaired.

Links

1. Orica permits linking to this website, provided that the full html page is loaded. Any such links must not incorporate our trade marks or service marks, and must not be used to disparage or otherwise detrimentally affect our reputation of Orica.
2. Information on this website may include links to the websites of others, including, without limitation, Orica share price information supplied by the Australian Stock Exchange. These links are provided for your convenience only. We do not endorse, guarantee or approve the content or accuracy of these websites, and does not recommend the products, services or information on these websites.
3. We do not warrant that information on any third party websites is free from computer viruses or any defects, errors or infringements of intellectual property rights, nor do we authorise any such infringement by providing these links.
4. We disclaim liability for any loss or damage whatsoever arising from your use of links to third party websites.

Unsolicited Ideas

It is our policy not to accept information from third parties which is confidential or proprietary. If you wish to retain the confidentiality of your material, do not submit it to us via email or otherwise without first obtaining our agreement.

Jurisdiction

1. The laws of the State of Victoria, Australia, apply to this Disclaimer.
2. If you access this website in a jurisdiction other than Victoria, Australia, you should consider whether your use complies with the laws of that jurisdiction, to the extent that they apply.
3. If the information on this website is translated into or presented in languages other than English, the English version of that information will be authoritative in relation to any disputes regarding its interpretation.

(Last updated 1 July 2012)

You can contact system administration or request help via the following email address
ITServiceDesk@orica.com

The user is then presented with the BlastIQ home screen.

You may not be presented with any sites at this stage. Site access is requested from your local site administrator.

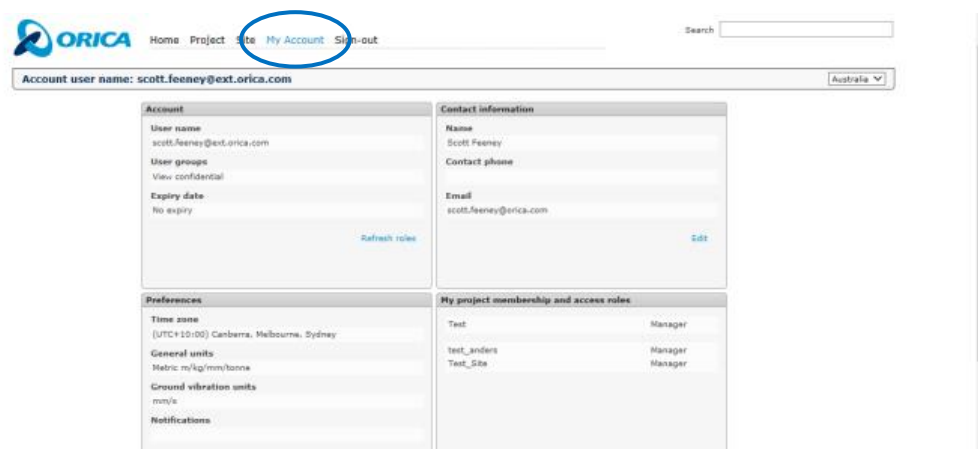


For help and support, please contact the Orica Global Service Desk:

For Orica users on the Orica network: <https://orica.service-now.com/ess/>

For all users: email itservicedesk@orica.com

10. Select **My Account** to modify the user preferences.



11. Add new information:
 - **Contact phone** number
 - **General units**
 - **Vibration units**
12. Select the **Time zone**, if required.
13. Select required **Notifications**.

14. Select **Update** to save the new settings and information.

ORICA Home Project Site My Account Sign-out

Edit my account

Full name of user
Scott Feeney

Contact phone

General units
☒ m,mm,kg,tonne ☐ ft,in,lb,ton

Vibration units
☒ mm/s ☐ in/s

Time zone
(UTC+10:00) Canberra, Melbourne, Sydney

Notifications

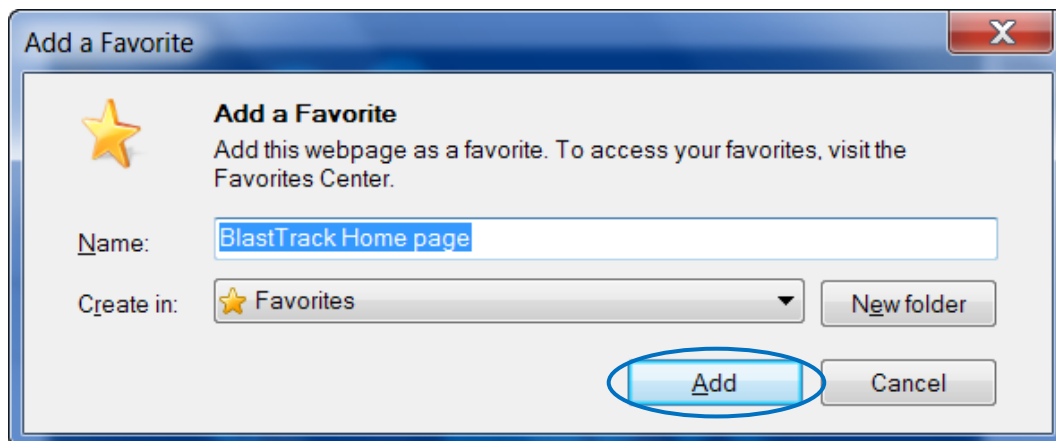
- ☐ Notify when document added
- ☐ Notify when new measurement added
- ☐ Notify when new blast created
- ☐ Notify when document dropped updated
- ☐ Notify when job pack updated
- ☐ Notify project member added
- ☐ Notify project member removed
- ☐ Notify project member role changed
- ☐ Notify user given site access
- ☐ Notify user site access removed
- ☐ Notify user site access role changed
- ☐ Notify user created new site

Update Cancel

Terms & Conditions | © Copyright 2015 Orica Limited. All rights reserved. | Build 1.13

After the user preferences have been saved, bookmark BlastIQ.

15. Select **Home** to return to the BlastIQ home page.
16. Select **[Ctrl] + [d]**.
17. If prompted with the following message, select **Add**.
Some browsers will add a bookmark without this message.



Future access to BlastIQ site can be performed via the bookmark created.

3 BLASTIQ ROLES DEFINED

Section Revision: 0

Revision Date: August 2015

3.1 OVERVIEW

Site Managers may view and edit the project definition and view and edit information in all project sites subject to the confidentiality provisions.

Editors may view and edit all blasting information at a site subject to the confidentiality provisions.

Contributors may view all blasting information restricted by the confidentiality provisions and add new documents to a site.

Viewers may view all blasting information restricted by the confidentiality provisions at a site.

3.2 BLASTIQ USER ROLE PERMISSIONS

The user roles as defined in the BlastIQ system provide different levels of permission to perform system tasks. *Table 3 1: BlastIQ User Role Permissions* details which level of user can perform each task.

Table 3-1: BlastIQ User Role Permissions

Task	Viewer	Contributor	Editor	Site Manager
Viewer task	✓	✓	✓	✓
Contributor task		✓	✓	✓
Edit site information			✓	✓
Create and edit points of interest <ul style="list-style-type: none"> - upload points of interest from a SHOTPlus 5 file - create points of interest in BlastIQ - configure environmental monitors 			✓	✓
Create new blasts			✓	✓
Edit the blast details <ul style="list-style-type: none"> - details - name - notes 			✓	✓
Upload SHOTPlus 5 file			✓	✓
Edit blast properties			✓	✓
Record blast measures <ul style="list-style-type: none"> - blast measures - environmental measures 			✓	✓
Complete the job pack <ul style="list-style-type: none"> - mark items as complete - add comments to job pack fields - job pack file uploads 			✓	✓

Task	Viewer	Contributor	Editor	Site Manager
Use the Documents Manager <ul style="list-style-type: none"> - new folder creation - folder relocation - rename folder - folder deletion - upload a file using Documents Manager - download a file using Documents Manager - move a file using Documents Manager - delete a file using Documents Manager - make a file confidential using Documents Manager 			✓	✓
Use the Images library			✓	✓
Use the Videos library			✓	✓
General site configuration <ul style="list-style-type: none"> - add site members - optional features - Confidential blast information - blast type descriptors - blast measures 				✓
Create a job pack definition <ul style="list-style-type: none"> - configuring to upload a job pack item from file - configuring to upload a job pack item from SHOTPlus5 - configuring to manually enter a job pack item 				✓
Configure site map <ul style="list-style-type: none"> - define site map coordinate system - upload a map overlay - select a default site map view 				✓
Add news articles to site page				✓

4 USING BLASTIQ AS A VIEWER

Section Revision: 0

Revision Date: November 2015

4.1 OVERVIEW

Viewers may view all blasting information restricted by the confidentiality provisions at a site.

4.2 VIEWING SITE INFORMATION

Access to sites on BlastIQ is available in three ways:

- Selecting the **site** hyperlink listed under *Sites and open blasts*
- Selecting the appropriate **red dot** (site location) on the map
- Selecting **Site** / site name

The screenshot displays the BlastIQ web application interface. At the top, the Orica logo is on the left, and navigation links for Home, Site, My Account, and Sign-out are in the center. A search bar is on the right. Below the navigation bar, a welcome message for Scott Feeney is shown. The main content area is divided into three sections: News, 3 users online, and Job Queue. The News section contains a link to 'Welcome to BlastTrack Test'. The 3 users online section lists Austin Turner, Richard E. Leghissa, and Scott Feeney, all associated with Orica. The Job Queue section shows 'No jobs queued'. The central part of the interface features a map of Australia with a red dot indicating a site location. To the right of the map, a sidebar titled 'Sites and open blasts' lists 'Demonstration Mine 1' with a red dot icon. Below the map, there are sections for 'Recent Notifications' (showing 'No recent notifications') and 'Recent Activity' (listing several recent events, including document uploads and blast creations).

The site homepage is displayed.

NOTICE

To navigate to the view below, the 'Overview' tab may need to be selected. Each tab represents a different website area.

The screenshot displays the ORICA BlastIQ web interface. At the top, the ORICA logo is on the left, and navigation links (Home, Site, My Account, Sign-out) and a search bar are on the right. Below the navigation bar, a series of tabs (Overview, Site Map, Blasts, Performance, Documents, Images, Videos) are shown, with 'Overview' selected and circled in blue. The main content area is titled 'Demonstration Mine 1' and contains several panels:

- Site user access:** A table listing users and their roles.

User	Role
Alain Silic	Orica
Ben Wynn	Orica
Geoff Stevenson	Orica
hung.chau@orica.com	Orica
Konrad Schmidt	Orica
mark.iring@edapa.com.au	Adapa
Rachel Purdie	Orica
Rohan Stevens	Orica
Scott Feeney	Orica
- LoadPlus:** Information about the LoadPlus site name and updates.

Field	Value
LoadPlus site name	Active
Last update	13/11/2015 11:22 AM
Next update	13/11/2015 11:37 AM
Last product update	13/11/2015 11:00 AM
System status	System Ok
- File transfer folder:** A table showing file transfers.

File Name	Date
BlastTrack Technical Field Guide.docx	13/11/2015
- Blasting Timeline:** A calendar view showing blasting activity from July 15 to December 15.
- Blasting descriptors implemented:** A section for Blast Type.
- Blasting measures implemented:** A section for Excavator E05 Dig Rate.
- Recent Activity:** A list of recent events, including document uploads and blast creation.
- Monitoring points (POI):** A section for Environmental 01.
- Open Blasts:** A list of open blasts with progress bars.

Blast Name	Status
ALISON 6	Active
ALISON 8	Active
ALISON 9 PS	Active
ALISON10 TSB	Active
B2021	Active
BEN TEST 02	Active
BEN01	Active
H2130	Active
UAT_Test01	Active

4.3 THE SITE OVERVIEW

The Site Overview view provides the user with information regarding:

- Who has **Site user access**
- **LOADPlus** information, if the site is LOADPlus enabled
- **File transfer folder**
- **Blasting Timeline** for site blasts
- **Blasting descriptors implemented**
- **Blasting measures implemented**
- **Recent Activity**
- **Monitoring points (POI)**
- **Open Blasts**

1. Select the **Overview** tab.

ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos

Demonstration Mine 1

Site user access

Alain Silic	Orica
Ben Wynn	Orica
Geoff Stevenson	Orica
hung.chau@orica.com	Orica
Konrad Schmidt	Orica
mark.irving@adapa.com.au	Adapa
Rachel Purdie	Orica
Rohan Stevens	Orica
Scott Feeney	Orica

LoadPlus

LoadPlus site name

LoadPlus updates Active

Last update 13/11/2015 11:22 AM

Next update 13/11/2015 11:37 AM

Last product update 13/11/2015 11:00 AM

System status System Ok

File transfer folder Full details...

BlastTrack Technical Field Guide.docx 13/11/2015

Blasting Timeline

July 15 August 15 September 15 October 15 November 15 December 15

Blasting descriptors implemented

Blast Type The type of blast categorized as per site procedure.

Blasting measures implemented

Excavator E05 Dig Rate Dig rate for Hitachi 3500 number EX05.

Recent Activity

13/11/2015 - Document BlastTrack Technical Field Guide.docx uploaded to site Demonstration Mine 1 by Austin Turner

12/11/2015 - Document OV23543_BL3 Production 14.12.14 saved end of day 29.12.spf uploaded to site Demonstration Mine 1 by Austin Turner

12/11/2015 - Blast Demonstration_Coal_Blast created by Austin Turner

12/11/2015 - Blast BEN TEST 02 created by Loadplus

Monitoring points (POI) Table...

Environmental 01

Open Blasts

- ALISON 6
- ALISON 8
- ALISON 9 PS
- ALISON10 TSB
- B2021
- BEN TEST 02
- BEN01
- H2130
- UAT_Test01

4.3.1 Viewing Details of Transferred Files

1. Select **Full details...** (in the **File transfer folder** area).
2. The system goes to the **Documents** area for the site.

ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance **Documents** Images Videos

Demonstration Mine 1

Demonstration Mine 1

- Blasts
- Site Document Templates
- Temporary Files

Name	Version	Size (kb)	Uploaded	Uploader	Actions
BlastTrack Technical Field Guide.docx	1	18.8	13/11/2015 11:36:48 AM	Austin Turner	

☐ Show all file versions

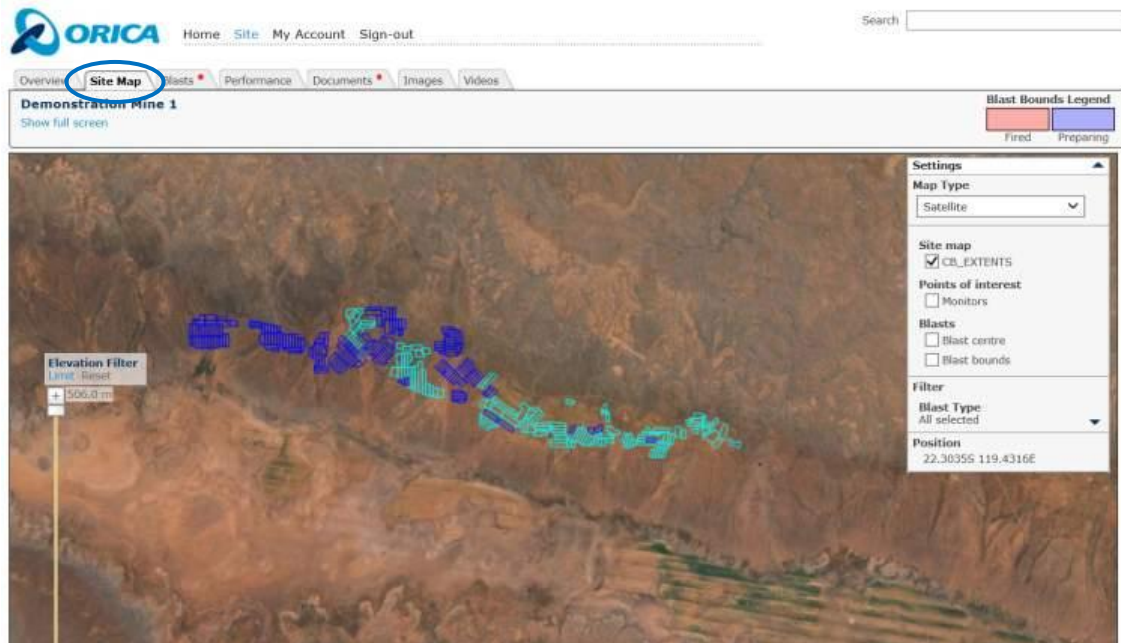
NOTICE

Selecting any item in light blue font takes the user to the relevant area of the website, i.e. selecting a document moves to Documents, selecting a blast moves to Blast.

4.4 VIEWING THE SITE MAP

The maps used in BlastIQ are sourced from Google Maps.

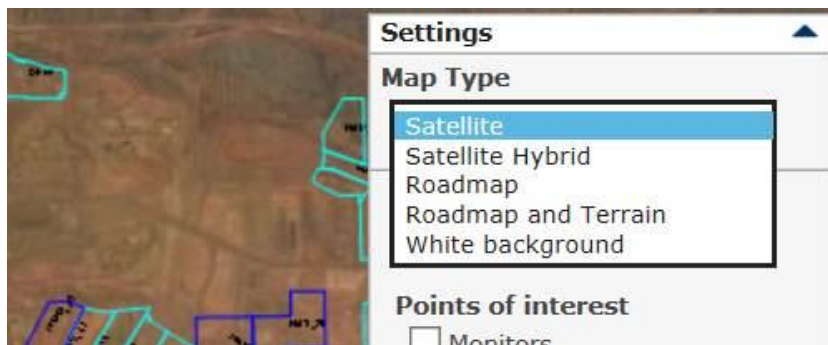
1. Select the **Site Map** tab.



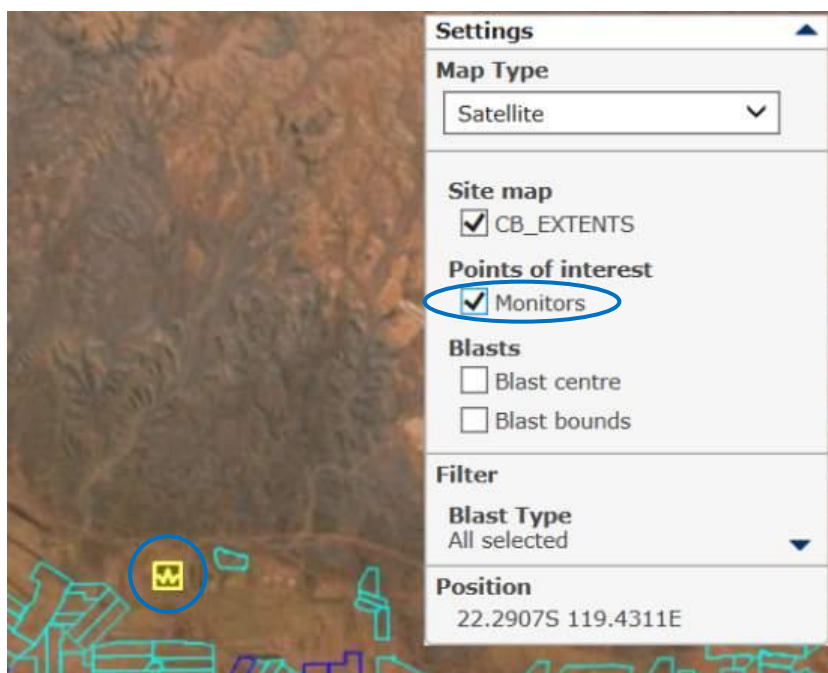
2. Move your location on the map by left-clicking and holding on the mouse and moving away to the new area.
3. Zoom in or out by using the mouse scroll wheel or + / - buttons.



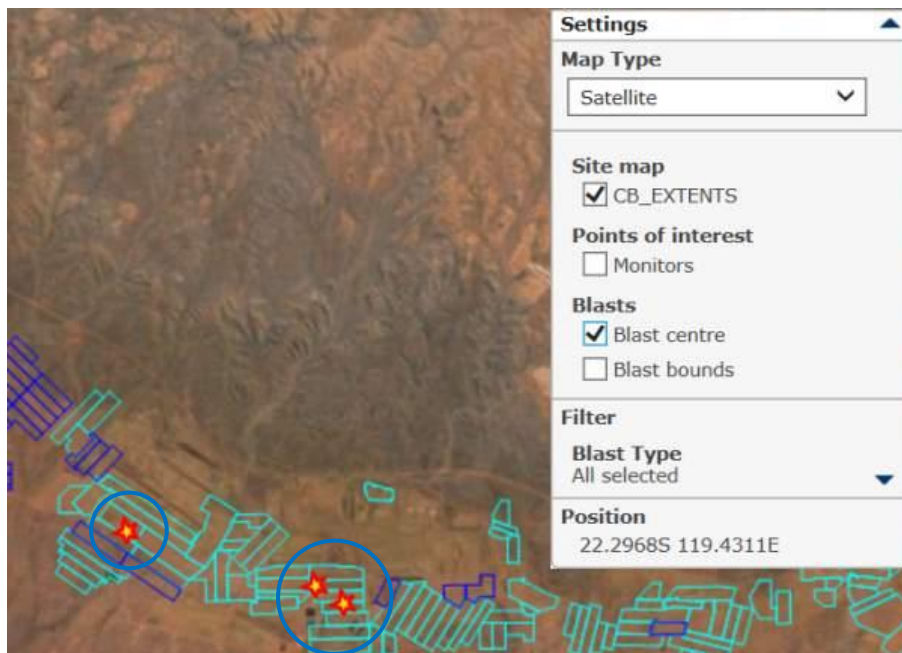
4. The type of map displayed can be changed using the drop-down. Choices available are:
- Satellite
 - Satellite Hybrid
 - Roadmap
 - Roadmap and Terrain
 - White background



5. The location of monitors can be shown by selecting **Monitors** (under **Points of Interest**).



6. The locations of previously fired blasts can be show by selecting **Blast centre** (under **Blasts**).



7. The locations of blast bounds can be show by selecting **Blast bounds** (under **Blasts**).



8. The type of blast being viewed can be modified using the dropdown menu arrow.

Filter

Blast Type
All selected

☒ (no value)

☒ Production

☒ Pre-split

☒ Overburden

☒ 00000000-0000-0000-0000-000000000000

☒ 6f6efaf9-c545-49ad-9c39-efb6659aa9c6

☒ 8a3eb7d5-a88f-4352-8120-af08fea922ef

4.5 VIEWING THE SITE BLASTS

Site Blasts can be viewed in a number of ways. To do this:

1. Select the **Blasts** tab.

ORICA Home Site My Account Sign-out Search

Overview Site Map **Blasts** Performance Documents Images Videos

Blast list
Reset filters

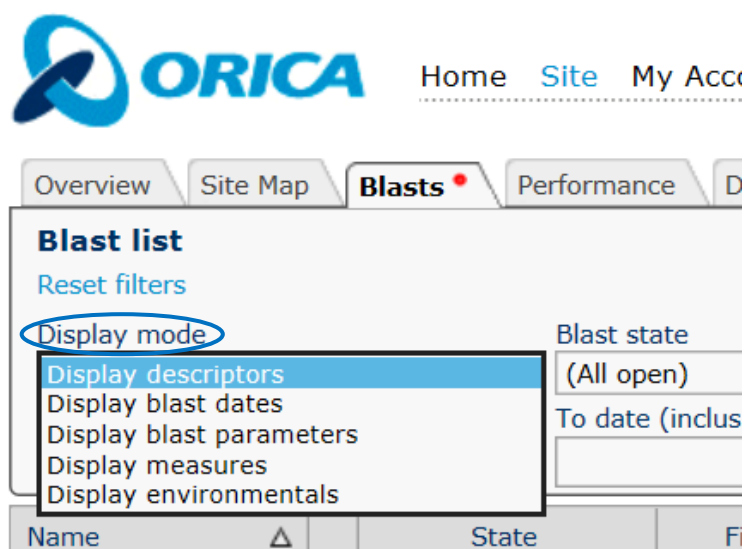
Display mode: Blast state: (All open) Blast Type: (All values)

From date (inclusive): To date (inclusive):

Name	State	Fired On	Blast Type	Details
ALISON 6	Released for loading		6f6efaf9-c545-49ad-9c39-efb6659aa9c6	
ALISON 8	Released for loading		00000000-0000-0000-0000-000000000000	
ALISON 9 PS	Released for loading		00000000-0000-0000-0000-000000000000	
ALISON10 TSB	Released for loading		00000000-0000-0000-0000-000000000000	
B2021	Designed		Production	
BEN TEST 02	Created		8a3eb7d5-a88f-4352-8120-af08fea922ef	
BEN01	Released for loading		6f6efaf9-c545-49ad-9c39-efb6659aa9c6	
H2130	Designed		Overburden	
UAT_Test01	Designed			

The display mode can be changed by:

2. Selecting the 'drop-down' arrow in the **Display mode** field.

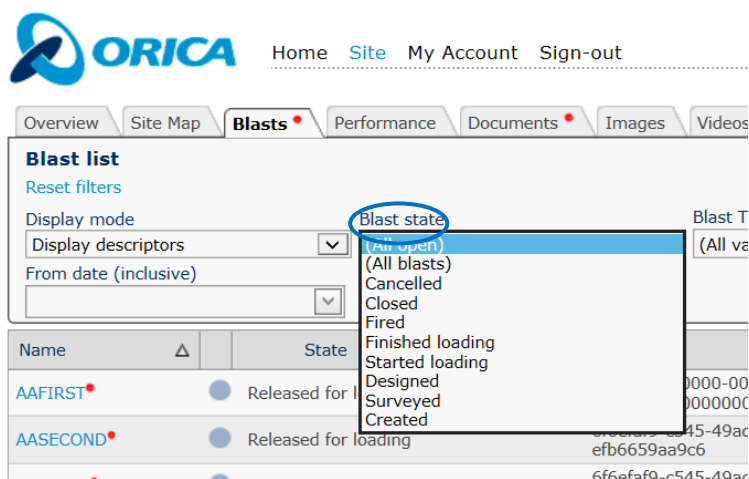


Modes available are:

- **Display descriptors** – Name, State, Fired On, Blast Type, Details
- **Display blast dates** – Name, State, Created by, Surveyed, Designed Started loading, Proposed firing, Fired On
- **Display blast parameters** – Name, Elevation, Design volume, Actual volume, Design Powder Factor (PF), Actual PF
- **Displays measures** – Name, predefined Measures (eg. Dig Rates)
- **Display environmental** – Name, Maximum Instantaneous Charge (MIC), Max. PPV, Recorded at POI, Max. over pressure, Recorded at POI

The state of the blast may be selected by:

3. Selecting the 'drop-down' arrow in the **Blast state** field.

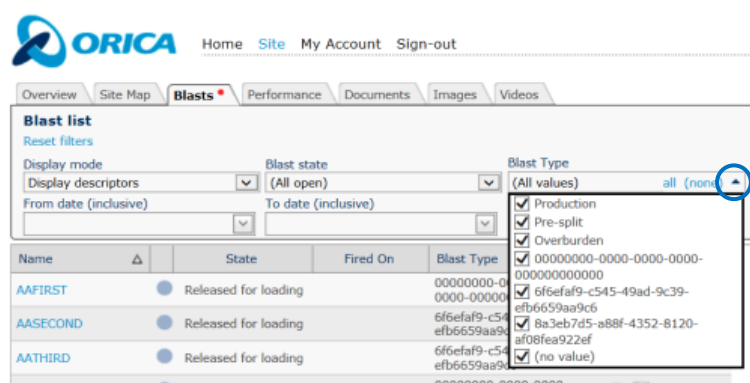


States available are:

- All open
- All blasts
- Cancelled
- Closed
- Fired
- Finished loading
- Started loading
- Designed
- Surveyed
- Created

The type of blast being displayed can be changed by:

4. Selecting the 'drop-down' arrow in the **Blast Type** field.



Types available are:

- Production
- Pre-split
- Overburden
- Any other types set up in the *Descriptors* field under *Site Admin*

A date range for blasts can also be chosen. This is done by:

5. Selecting the 'drop-down' arrow in the **From date** field.
and / or
Selecting the 'drop-down' arrow in the **To date** field.
6. Selecting the date required in the calendar view.

The screenshot shows the ORICA Blast list interface. At the top, there is a navigation bar with the ORICA logo and links for Home, Site, My Account, and Sign-out. Below this is a tabbed interface with tabs for Overview, Site Map, Blasts (selected), Performance, Documents, Images, and Vi. The main content area is titled 'Blast list' and includes a 'Reset filters' link. There are two dropdown menus: 'Display mode' (set to 'Display descriptors') and 'Blast state' (set to '(All open)'). Below these are two date range filters: 'From date (inclusive)' and 'To date (inclusive)'. Both dropdown arrows are circled in blue. A calendar for December 2015 is open, showing the date 14th highlighted with a red box. The calendar has buttons for 'Today' and 'Clear'. The background shows a table with columns 'Fired On' and 'Blast Type'.

Fired On	Blast Type
00000000-0000-00000000	0000-00000000
6f6efaf9-c54!efb6659aa9c	6f6efaf9-c54!efb6659aa9c
6f6efaf9-c54!efb6659aa9c	6f6efaf9-c54!efb6659aa9c
00000000-0000-00000000	0000-00000000
00000000-0000-00000000	0000-00000000
6f6efaf9-c54!efb6659aa9c	6f6efaf9-c54!efb6659aa9c
6f6efaf9-c54!efb6659aa9c	6f6efaf9-c54!efb6659aa9c

4.5.1 Individual Blast Information

Each blast can be individually investigated.

NOTICE

Not all fields shown here are available for each blast.

1. Select the blast.

The screenshot displays the ORICA Blast list interface. At the top, there is a navigation bar with links for Home, Site, My Account, and Sign-out. Below this is a search bar. The main content area is titled 'Blast list' and includes a 'Reset filters' link. There are three dropdown menus for filtering: 'Display mode' (set to 'Display descriptors'), 'Blast state' (set to '(All open)'), and 'Blast Type' (set to '(All selected)'). Below these are two date range selectors: 'From date (inclusive)' and 'To date (inclusive)'. The main table lists various blast records. The 'B2021' row is circled in blue. The table columns are: Name, State, Fired On, Blast Type, and Details.

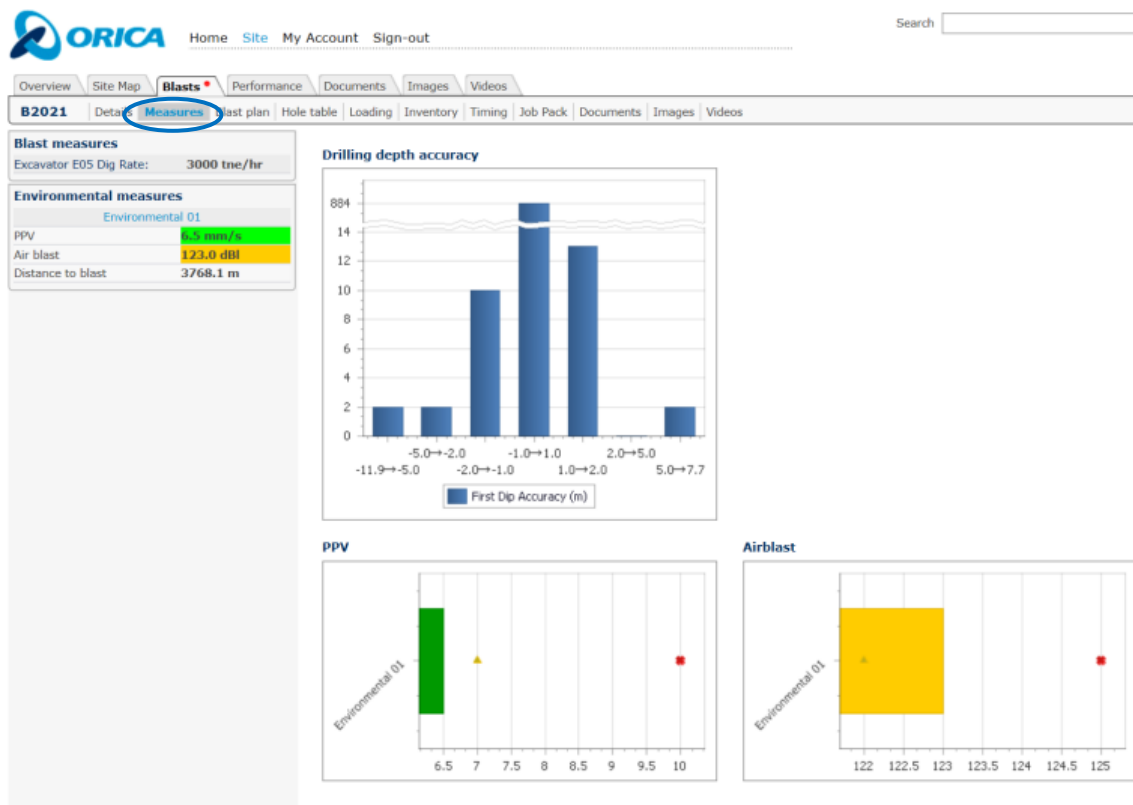
Name	State	Fired On	Blast Type	Details
AAFIRST	Released for loading		00000000-0000-0000-0000-000000000000	
AASECOND	Released for loading		6f6efaf9-c545-49ad-9c39-efb6659aa9c6	
AATHIRD	Released for loading		6f6efaf9-c545-49ad-9c39-efb6659aa9c6	
ALISON 11	Created		00000000-0000-0000-0000-000000000000	
ALISON 12	Released for loading		00000000-0000-0000-0000-000000000000	
ALISON 13	Created		6f6efaf9-c545-49ad-9c39-efb6659aa9c6	
ALISON 13	Released for loading			
ALISON 6	Released for loading		6f6efaf9-c545-49ad-9c39-efb6659aa9c6	
ALISON 8	Released for loading		00000000-0000-0000-0000-000000000000	
ALISON 9 PS	Released for loading		00000000-0000-0000-0000-000000000000	
ALISON STRATA	Loading			
ALISON TSB2	Created			
ALISON10 TSB	Released for loading		00000000-0000-0000-0000-000000000000	
ALISON14	Released for loading			
B2021	Designed		Production	
BAYSSP01	Released for loading		00000000-0000-0000-0000-000000000000	
BEN 4 DECK	Released for loading		00000000-0000-0000-0000-000000000000	
BEN NLOCK	Released for loading		8a3eb7d5-a88f-4352-8120-af08fa922ef	
BEN NLOCK	Released for loading		8a3eb7d5-a88f-4352-8120-	

2. The blast **Details** are displayed as default.

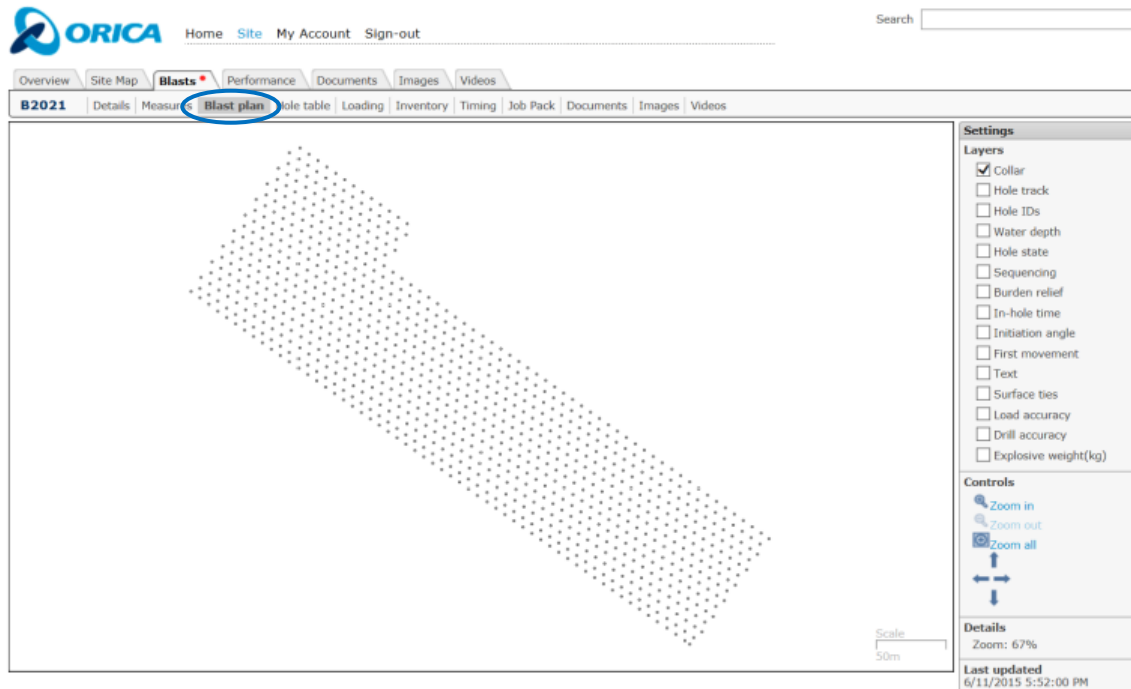
Blast properties

Number of holes:	915	Total loaded explosive weight:	352,482 kg
Total design explosive weight:	352,482 kg	Variance:	0 kg
Volume Method (designed):	Manual	Powder Factor (actual):	0.50 kg/m ³
Powder Factor (designed):	0.54 kg/m ³	Energy Factor (actual):	
Energy Factor (designed):	1.17 MJ/m ³		
Elevation:	402.3 m		
Number of redrills:	12	Re-drill Length:	12.1 m
Number of backfills:	1	Backfill Length:	1.2 m

3. Select **Measures** to display all pre-defined blast and environmental measures.



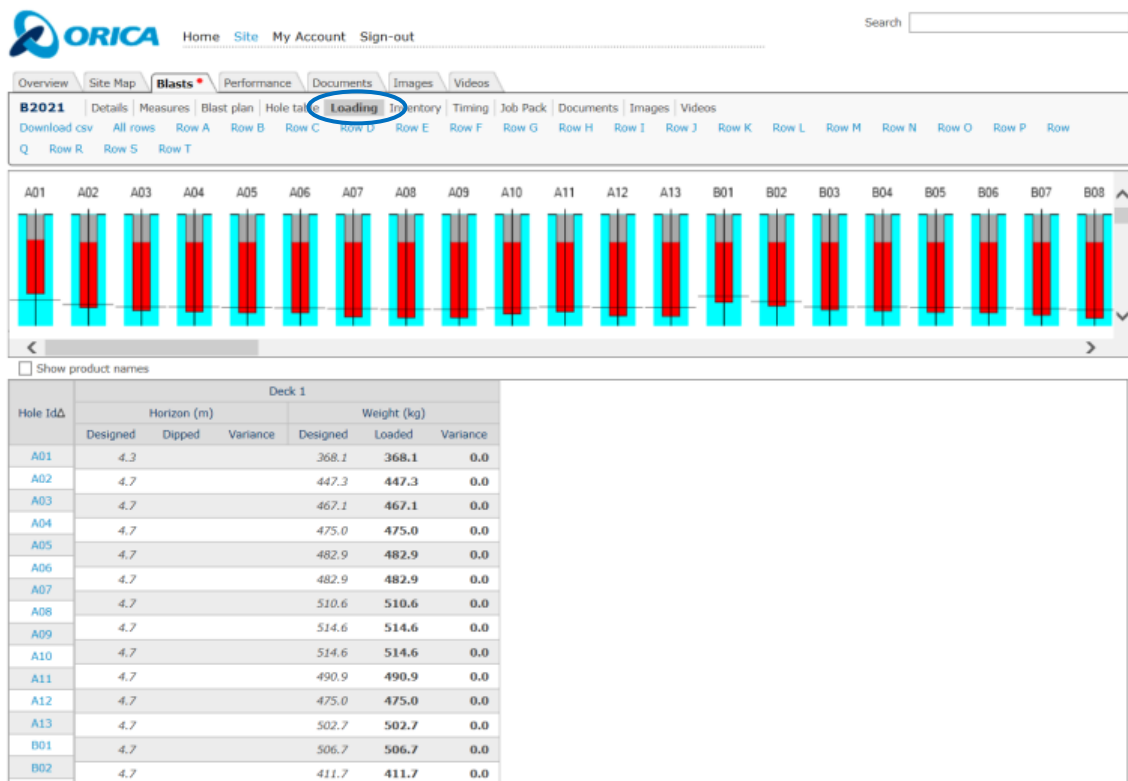
4. Select **Blast plan** to display a graphical representation of the blast plan imported from SHOTPlus 5.



5. Select **Hole table** to display a tabulated version of all data relating to each hole, eg. design and actual depth and angle, temperature, product weight and powder factor.

Id	Length (m)		Angle (°)		Bearing (°)	Sub-drill (m)	Bench Height (m)	Temperature (°C)	Water (m)	Designed (kg)	Loaded (kg)	Delay Time	Powder F (kg/m³)
	Designed	Actual	Designed	Actual									
A01	15.7	13.6	0.0	0.0	0.0	1.0	14.7		Dry	368.1	368.1	3093.4	0.5
A02	16.5	16.0	0.0	0.0	0.0	1.0	15.5		Dry	447.3	447.3	3163.0	0.5
A03	16.9	16.5	0.0	0.0	0.0	1.0	15.9		Dry	467.1	467.1	3231.8	0.5
A04	16.9	16.7	0.0	0.0	0.0	1.0	15.9		Dry	475.0	475.0	3300.5	0.5
A05	17.0	16.9	0.0	0.0	0.0	1.0	16.0		Dry	482.9	482.9	3369.2	0.5
A06	17.1	16.9	0.0	0.0	0.0	1.0	16.1		Dry	482.9	482.9	3437.8	0.5
A07	17.2	17.6	0.0	0.0	0.0	1.0	16.2		Dry	510.6	510.6	3506.7	0.5
A08	17.3	17.7	0.0	0.0	0.0	1.0	16.3		Dry	514.6	514.6	3575.3	0.5
A09	17.3	17.7	0.0	0.0	0.0	1.0	16.3		Dry	514.6	514.6	3643.9	0.5
A10	17.1	17.1	0.0	0.0	0.0	1.0	16.1		Dry	490.9	490.9	3712.2	0.5
A11	16.9	16.7	0.0	0.0	0.0	1.0	15.9		Dry	475.0	475.0	3780.6	0.5
A12	17.0	17.4	0.0	0.0	0.0	1.0	16.0		Dry	502.7	502.7	3849.5	0.5
A13	17.0	17.5	0.0	0.0	0.0	1.0	16.0		Dry	506.7	506.7	3918.2	0.5
B01	15.1	15.1	0.0	0.0	0.0	1.0	14.1		Dry	411.7	411.7	2919.8	0.9
B02	16.0	15.7	0.0	0.0	0.0	1.0	15.0		Dry	435.4	435.4	2988.6	0.5
B03	16.9	16.4	0.0	0.0	0.0	1.0	15.9		Dry	463.1	463.1	3057.5	0.5
B04	16.9	16.6	0.0	0.0	0.0	1.0	15.9		Dry	471.1	471.1	3126.2	0.5
B05	17.0	16.8	0.0	0.0	0.0	1.0	16.0		Dry	479.0	479.0	3194.9	0.5
B06	17.1	16.9	0.0	0.0	0.0	1.0	16.1		Dry	482.9	482.9	3263.5	0.5
B07	17.2	17.3	0.0	0.0	0.0	1.0	16.2		Dry	498.8	498.8	3332.2	0.5
B08	17.4	17.8	0.0	0.0	0.0	1.0	16.4		Dry	518.6	518.6	3401.1	0.5
B09	17.3	17.4	0.0	0.0	0.0	1.0	16.3		Dry	502.7	502.7	3469.5	0.5
B10	17.2	17.2	0.0	0.0	0.0	1.0	16.2		Dry	494.8	494.8	3537.9	0.5
B11	16.8	16.8	0.0	0.0	0.0	1.0	15.8		Dry	479.0	479.0	3606.3	0.5
B12	16.9	17.0	0.0	0.0	0.0	1.0	15.9		Dry	486.9	486.9	3675.0	0.5
B13	17.0	17.0	0.0	0.0	0.0	1.0	16.0		Dry	486.9	486.9	3743.6	0.5
B14	17.0	17.0	0.0	0.0	0.0	1.0	16.0		Dry	486.9	486.9	3812.2	0.5
C01	15.5	15.5	0.0	0.0	0.0	1.0	14.5		Dry	427.5	427.5	2814.2	0.5
C02	16.4	15.6	0.0	0.0	0.0	1.0	15.4		Dry	431.5	431.5	2882.8	0.5
C03	16.9	16.4	0.0	0.0	0.0	1.0	15.9		Dry	463.1	463.1	2951.8	0.5
C04	17.0	17.0	0.0	0.0	0.0	1.0	16.0		Dry	486.9	486.9	3020.6	0.5

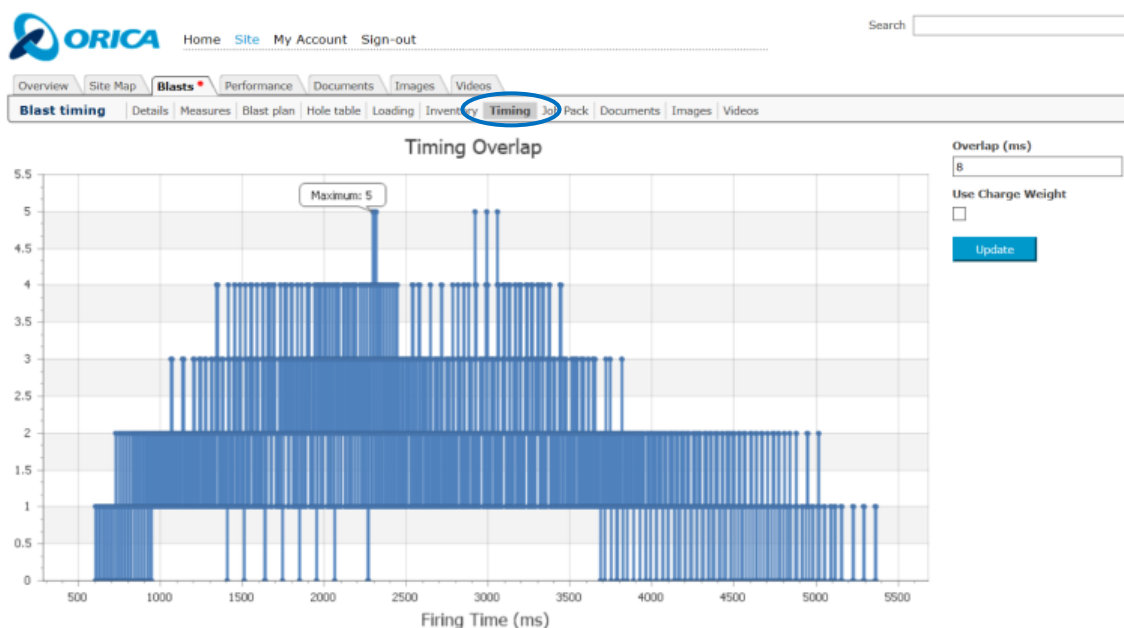
- Select **Loading** to display both a graphical and tabulated version of the as loaded data.



- Select **Inventory** to display the product list used in the design for that blast.

Inventory	Design Total	Actual Total
Initiators (items)		
Exel Enduradet 18m, #15 600ms		115.0
Exel Enduradet 24m, #15 600ms		237.0
Exel Enduradet 12m, #15.5 650ms		159.0
Exel Connectadet 12m, #100 100ms		780.0
Exel Connectadet 12m, #065 65ms		42.0
Exel Connectadet 12m, #017 17ms		23.0
Exel Enduradet 12m, #15 600ms		125.0
Exel Enduradet 15m, #15 600ms		495.0
Exel Connectadet 9m, #025 25ms		13.0
Exel Connectadet 12m, #175 175ms		56.0
Exel Enduradet 9m, #15 600ms		15.0
Primers (items)		
Pentex Booster, Pentex PP P		1146.0
Explosives (kg)		
ANFO, 0.80		237,358
Flexigel Advantage 100, 1.00		115,124
ANFO 0.8		237,358
Flexigel Advantage 100		115,124
Explosives - Total (kg)		352,482
Stemming (m³)		
Stemming, 2.50		192
Stemming		193
Drills (m)		
User defined, 251.0		12080.2

8. Select **Timing** to display the firing times (in milliseconds) for the blast.



9. Select **Job Pack** to display the job pack details related to that blast:

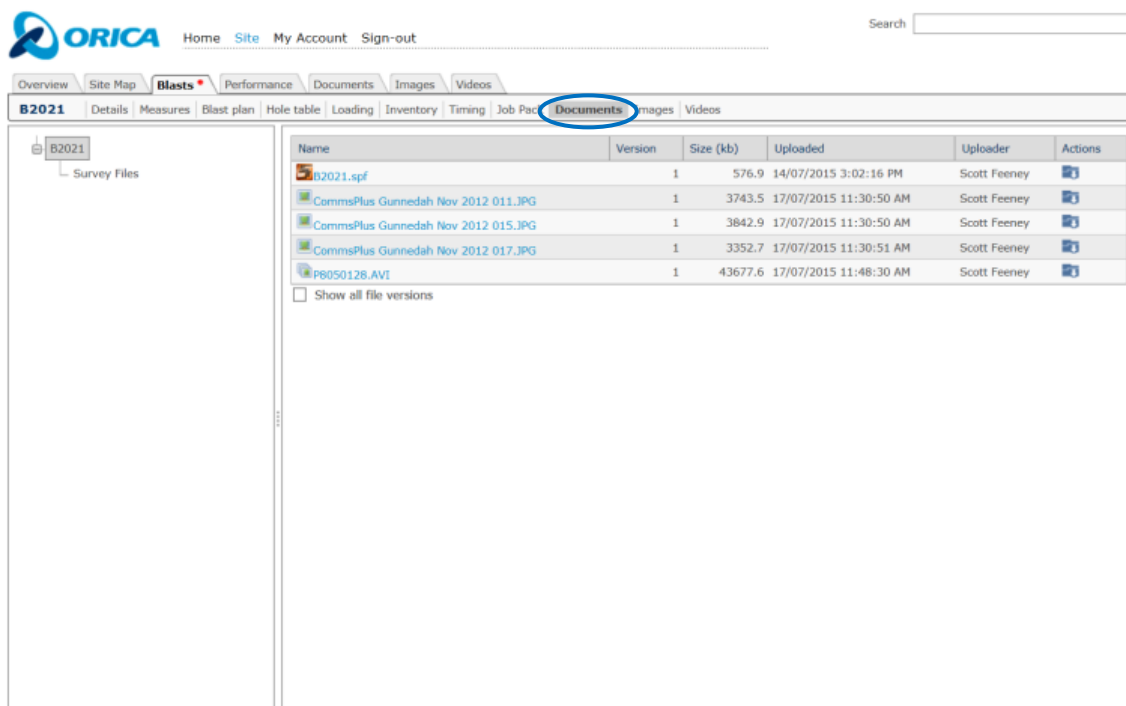
- Approvals
- Designs and Calculations
- Survey Data
- SHOTPlus Data

The screenshot shows the ORICA BlastIQ interface with the 'Job Pack' sub-tab selected. The main area displays the 'Job Pack' details for blast 'B2021'. The details are organized into sections: 'Approvals', 'Designs and Calculations', 'Survey Data', and 'SHOTPlus Data'. Each section contains a list of items with checkboxes and status information.

Section	Item	Status	Updated By
Approvals	Approved for Drilling	Checked	Updated 16/07/2015 11:49 AM by Scott Feeney
	Approved for Loading	Unchecked	Comment by Scott Feeney
	Approved for Firing	Unchecked	
Designs and Calculations	Pattern Design Calculation Sheet	Unchecked	
Survey Data	Bench Surface Survey	Checked	Updated 16/07/2015 12:15 PM by Scott Feeney
SHOTPlus Data	Blast Survey Plan	Unchecked	
	Blast Plan View	Checked	
	Loading Data Sheet	Checked	
	Dipping Data Sheet	Checked	
	Design Evaluation	Unchecked	
	Design	Unchecked	
	Load Quantities	Checked	
	Timing Design	Checked	

Job pack template last updated 10/07/2015 10:02 AM by Austin Turner

10. Select **Documents** to display the documents related to that blast.

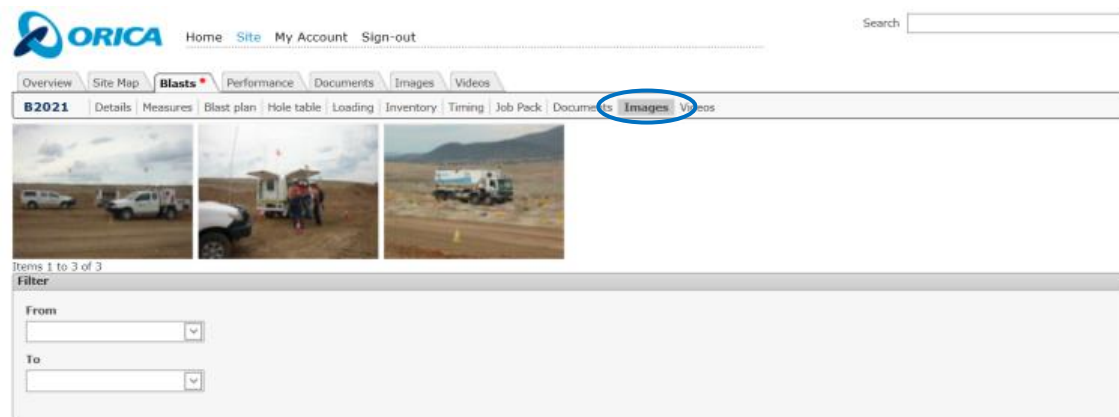


The screenshot shows the ORICA BlastIQ web application. The top navigation bar includes the ORICA logo, links for Home, Site, My Account, and Sign-out, and a search box. Below this is a secondary navigation bar with tabs for Overview, Site Map, Blasts (selected), Performance, Documents, Images, and Videos. A third navigation bar shows sub-tabs for B2021, Details, Measures, Blast plan, Hole table, Loading, Inventory, Timing, Job Pack, Documents (circled in blue), Images, and Videos. The main content area is divided into two panels. The left panel shows a tree view with 'B2021' and 'Survey Files'. The right panel displays a table of documents related to B2021.

Name	Version	Size (kb)	Uploaded	Uploader	Actions
B2021.spf	1	576.9	14/07/2015 3:02:16 PM	Scott Feeney	
CommsPlus Gunnedah Nov 2012 011.JPG	1	3743.5	17/07/2015 11:30:50 AM	Scott Feeney	
CommsPlus Gunnedah Nov 2012 015.JPG	1	3842.9	17/07/2015 11:30:50 AM	Scott Feeney	
CommsPlus Gunnedah Nov 2012 017.JPG	1	3352.7	17/07/2015 11:30:51 AM	Scott Feeney	
P8050128.AVI	1	43677.6	17/07/2015 11:48:30 AM	Scott Feeney	

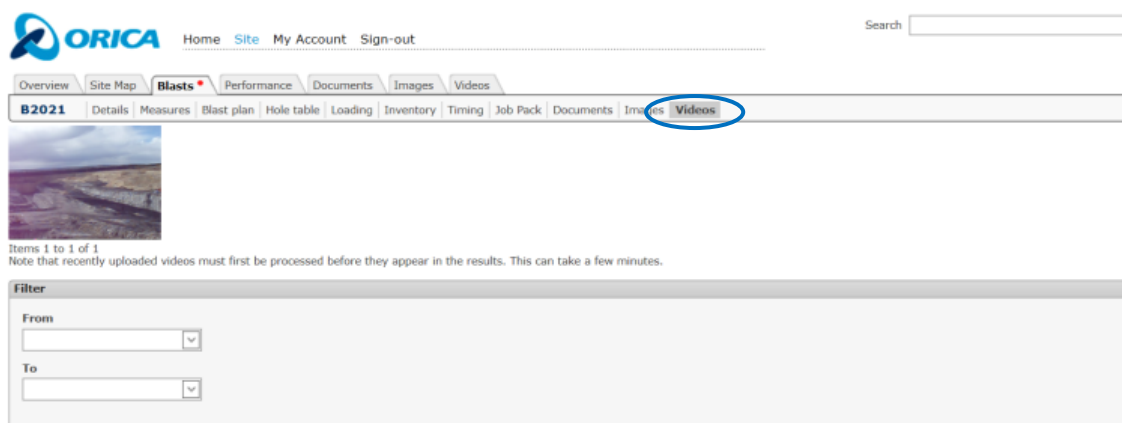
Below the table is a checkbox labeled 'Show all file versions'.

11. Select **Images** to display the images related to that blast.



The screenshot shows the ORICA BlastIQ web application with the 'Images' tab selected. The navigation bar is the same as in the previous screenshot, but the 'Images' tab in the third navigation bar is circled in blue. The main content area displays three thumbnail images of a white truck in a field. Below the images, it says 'Items 1 to 3 of 3'. A 'Filter' section is visible with 'From' and 'To' dropdown menus.

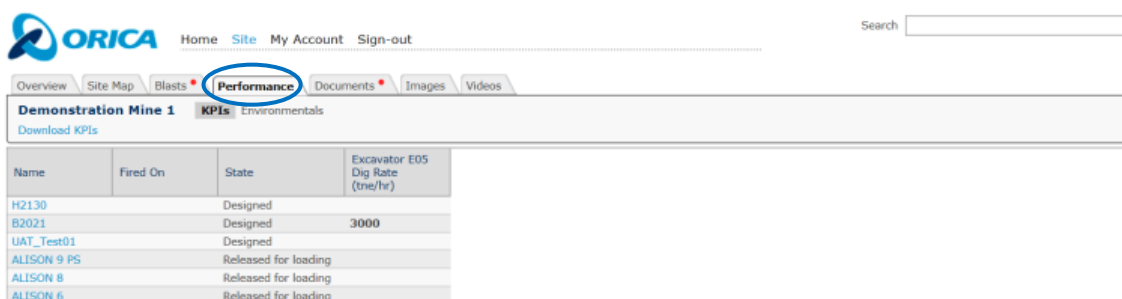
12. Select **Videos** to display the videos related to that blast.



4.6 VIEWING THE SITE PERFORMANCE

Site Performance allows you to view site Key Performance Indicators (KPIs) and Environmental performance.

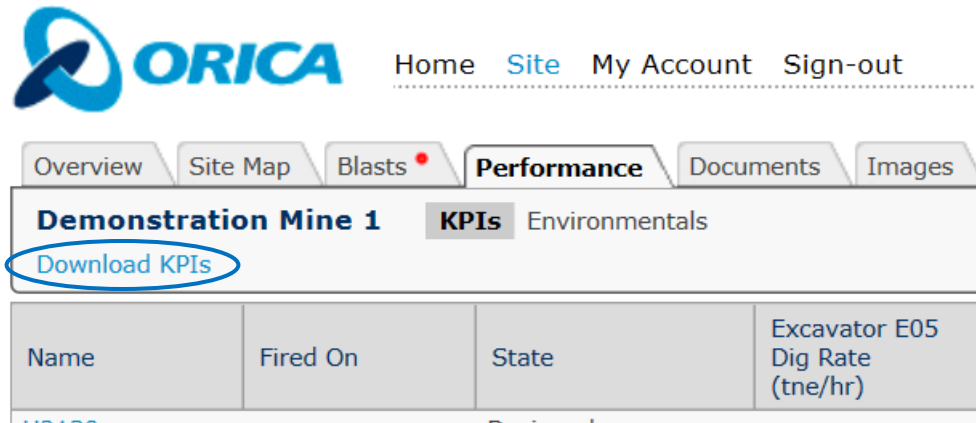
1. Select the **Performance** tab.



KPIs are displayed as the default.

To download the KPIs:

2. Select **Download KPIs**.



3. Select **Save**.



NOTICE

The above screenshot is from Internet Explorer 10.
File opening and saving may differ for other browsers.

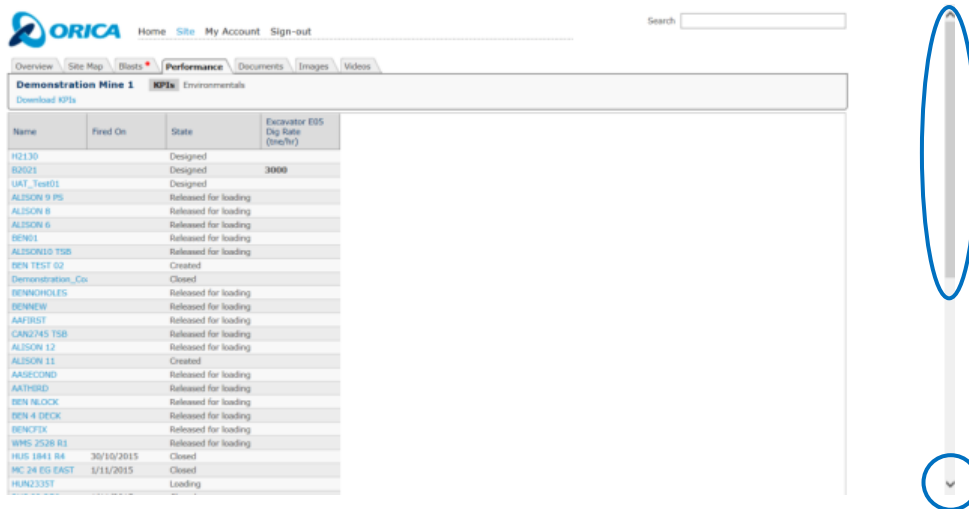
The file can be opened now, or the dialog box can be closed:

4. Select **X**.



The KPI data can be filtered for a selected date window.

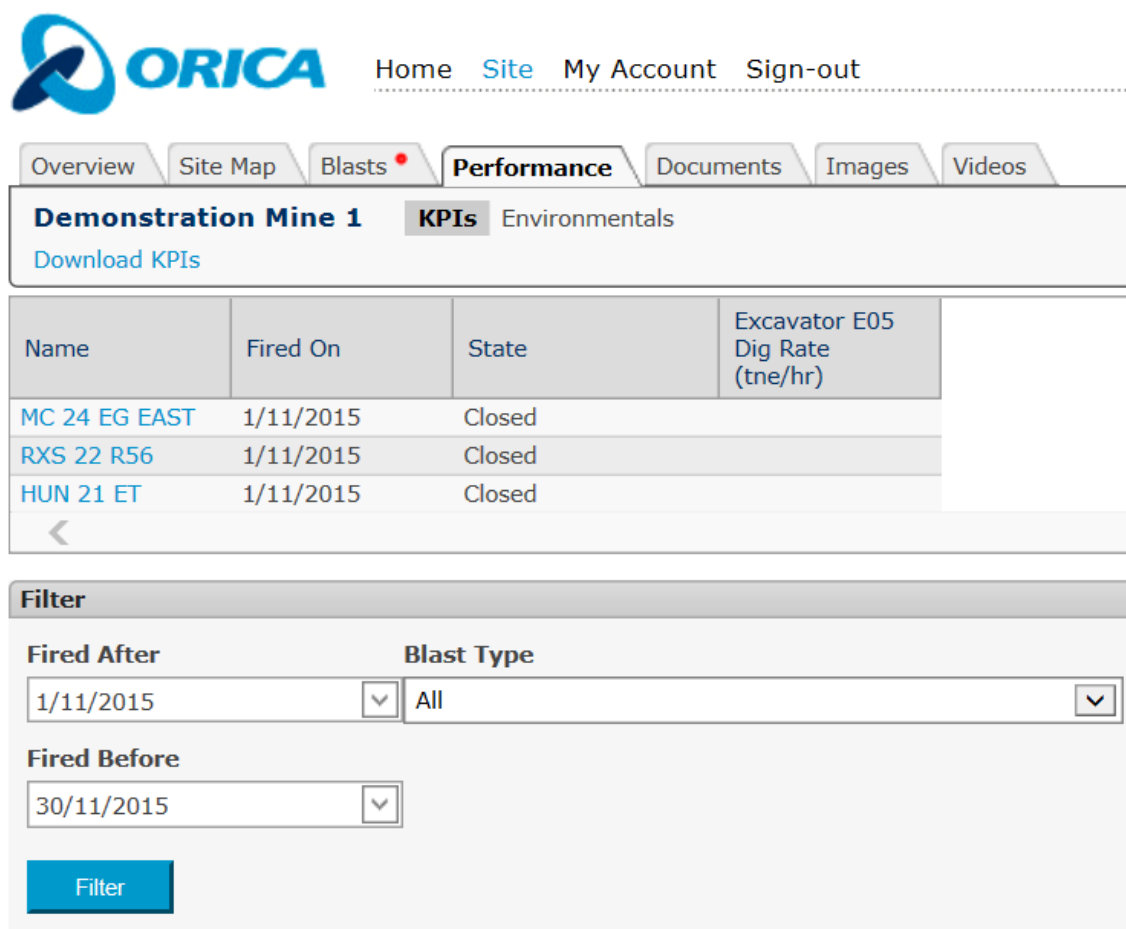
5. Scroll down to the bottom of the **KPIs** page by holding the scroll bar or selecting the arrow.



6. Select the **Fired After** date, **Fired Before** date and **Blast Type** using the drop down arrows.
7. Select **Filter**.

The screenshot shows the 'Filter' dialog box. It has three main sections: 'Fired After' with a date input field and a dropdown arrow, 'Fired Before' with a date input field and a dropdown arrow, and 'Blast Type' with a dropdown menu currently showing 'All'. A blue oval highlights the 'Filter' button at the bottom left of the dialog box.

8. The data for the selected window (only) will be displayed.



ORICA Home Site My Account Sign-out

Overview Site Map Blasts **Performance** Documents Images Videos

Demonstration Mine 1 KPIs Environmentals

[Download KPIs](#)

Name	Fired On	State	Excavator E05 Dig Rate (tne/hr)
MC 24 EG EAST	1/11/2015	Closed	
RXS 22 R56	1/11/2015	Closed	
HUN 21 ET	1/11/2015	Closed	

<

Filter

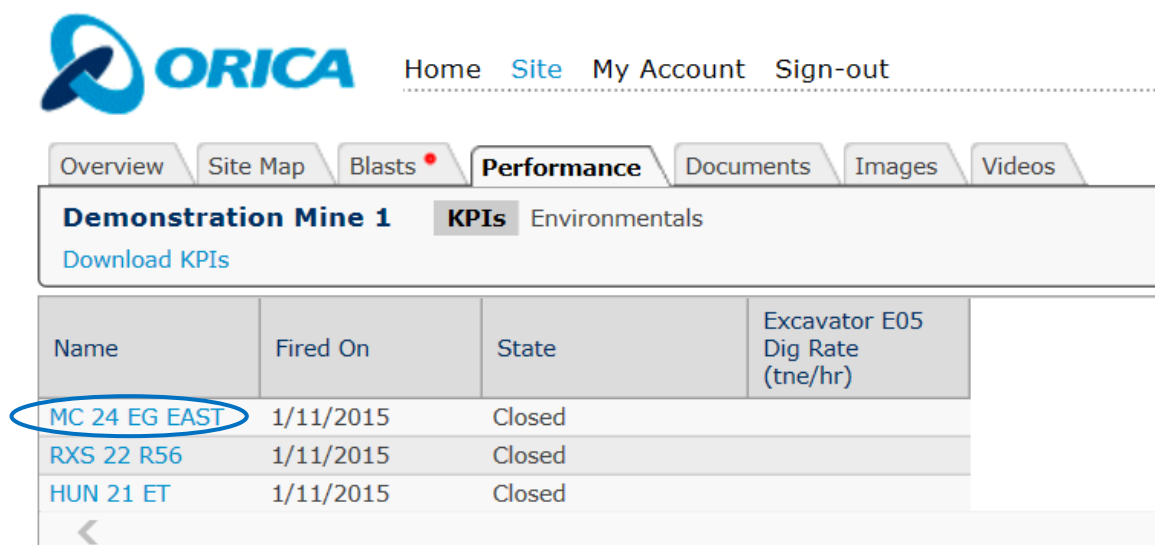
Fired After 1/11/2015 **Blast Type** All

Fired Before 30/11/2015

Filter

Individual blasts can be viewed.

9. Select the blast.



ORICA Home Site My Account Sign-out

Overview Site Map Blasts **Performance** Documents Images Videos

Demonstration Mine 1 KPIs Environmentals

[Download KPIs](#)

Name	Fired On	State	Excavator E05 Dig Rate (tne/hr)
MC 24 EG EAST	1/11/2015	Closed	
RXS 22 R56	1/11/2015	Closed	
HUN 21 ET	1/11/2015	Closed	

<

10. Details relating to the blast are displayed.

The screenshot displays the ORICA BlastIQ web application interface. At the top, the ORICA logo is on the left, and navigation links for Home, Site, My Account, and Sign-out are in the center. A search bar is on the right. Below the navigation bar, a series of tabs includes Overview, Site Map, Blasts (selected), Performance, Documents, Images, and Videos. Under the Blasts tab, there are sub-tabs: MC 24 EG EAST, Details, Measures, Hole table, Inventory, Job Pack, Documents, Images, and Videos. The main content area is titled 'Site Demonstration Mine 1' and contains several sections:

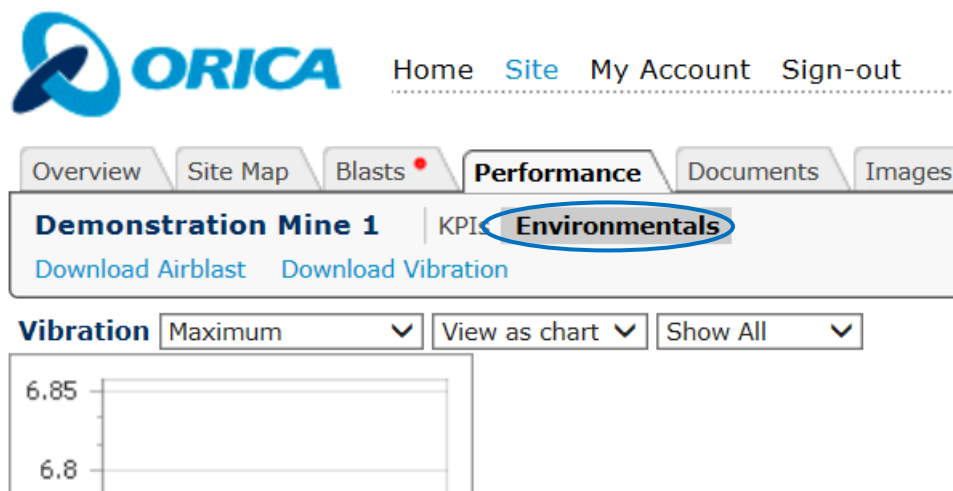
- Details:** Displays 'Blast: 00000000-0000-0000-0000-0000-000000000000', 'Type: 00000000000000', and 'Job pack: 0% complete'.
- Timeline:** Shows a progress bar for 'Closed' and a list of events: 'Created: 1/12/2015', 'Survey completed:', 'Design completed:', 'Released for loading:', 'Loading commenced: 14/10/2015', 'Loading completed:', and 'Firing time: 1/11/2015'.
- Environmental compliance:** States 'No recorded PPV values' and 'No recorded air blast values'.
- LoadPlus:** A table showing details for 'MC 24 EG EAST':

LoadPlus Id	MC 24 EG EAST
Created by	LoadPlus
Design values	LoadPlus
Loading data	LoadPlus
Last update	1/12/2015 3:15 PM
- Notes:** A section labeled '(none)'.
- Blast properties:** A section labeled 'Number of holes:'.
- Metadata:** A box on the right contains 'Name: MC 24 EG EAST', 'Customer reference: MC 24 EG EAST', and 'Description:'.

11. Each field can be viewed as described in Section 4.5.1 Individual Blast Information.

The Environmental performance of the site can be viewed.

1. Select **Environmentals**.



Under the **Vibration** heading, the Viewer can select between:

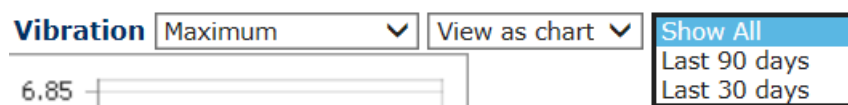
2. The **Maximum** vibration recorded or a particular monitoring point.



3. The display type, **chart** or **table**.



4. The timeframe to be displayed: **Show All**, **Last 90 days** or **Last 30 days**.

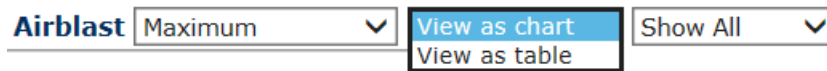


Under the **Airblast** heading, the Viewer can select between:

5. The **Maximum** airblast recorded or a particular monitoring point.



6. The display type, **chart** or **table**.

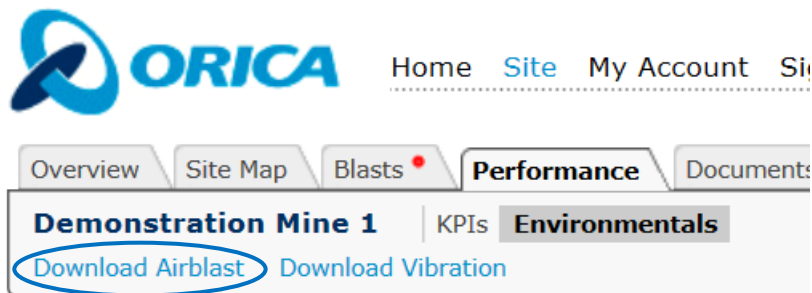


7. The timeframe to be displayed: **Show All**, **Last 90 days** or **Last 30 days**.



To download the **Airblast** data:

8. Select **Download Airblast**.

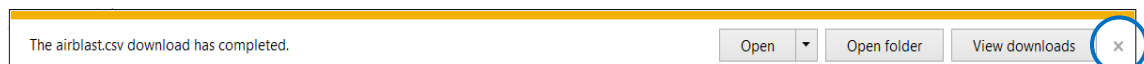


9. Select **Save**.



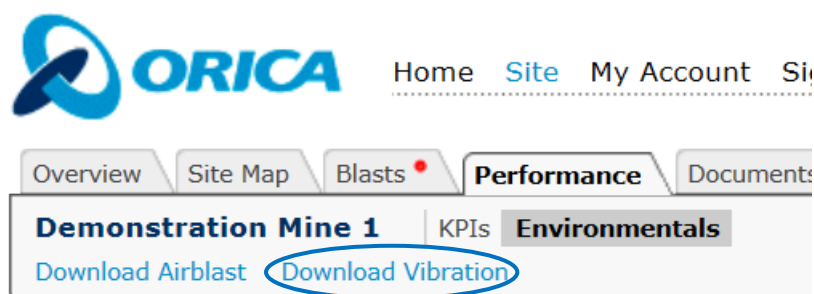
Close the dialog box:

10. Select **X**.



To download the **Vibration** data:

11. Select **Download Vibration**.



12. Select **Save**.



Close the dialog box:

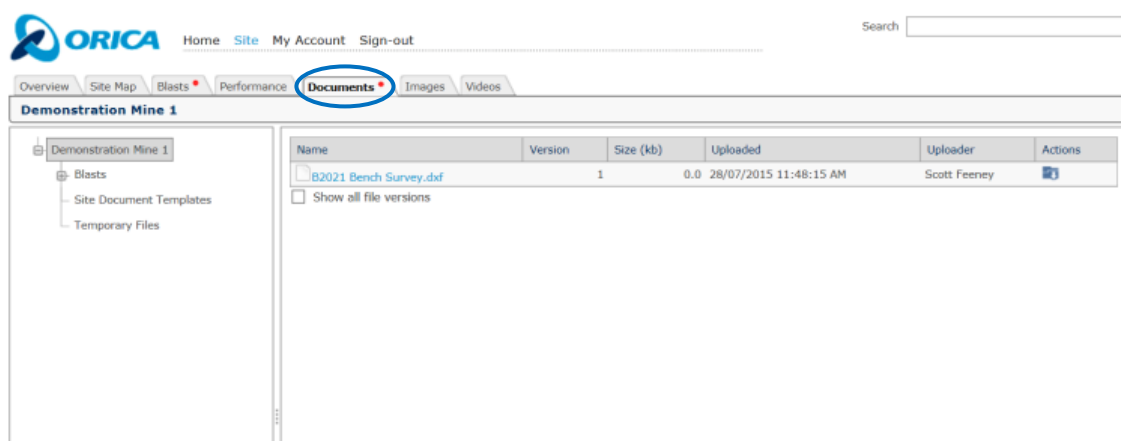
13. Select **X**.



4.7 VIEWING THE SITE DOCUMENTS

All **Documents** associated with the site, including previous versions of files, can be viewed and/or downloaded from here.

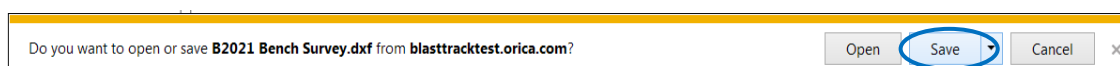
1. Select the **Documents** tab.



2. Select the **Download** icon next to the required file.



3. Select **Save**.



4. Close the dialog box.



Previous versions of the document/s can be viewed also.

5. Place a tick in the **Show all file versions** box.

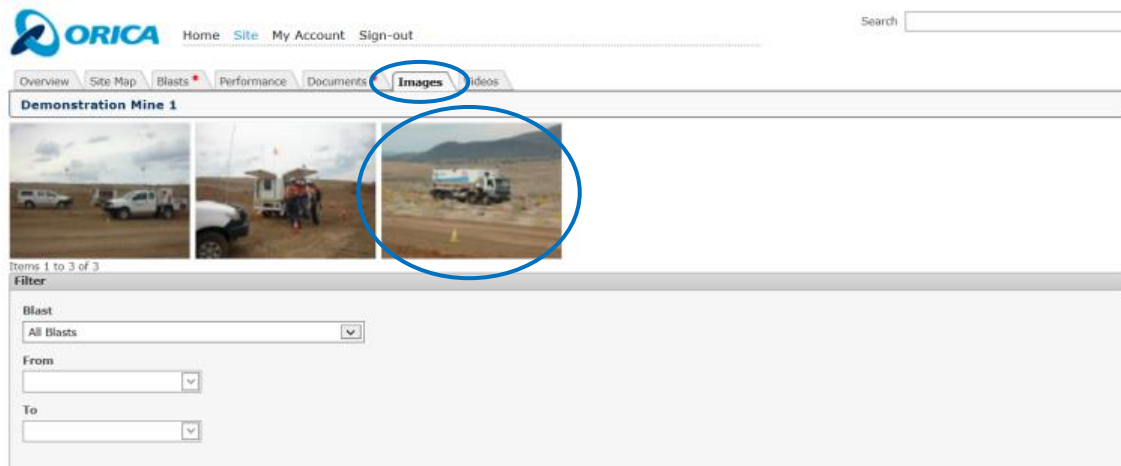
In the screenshot example there are no previous versions, so only the current version is being displayed.



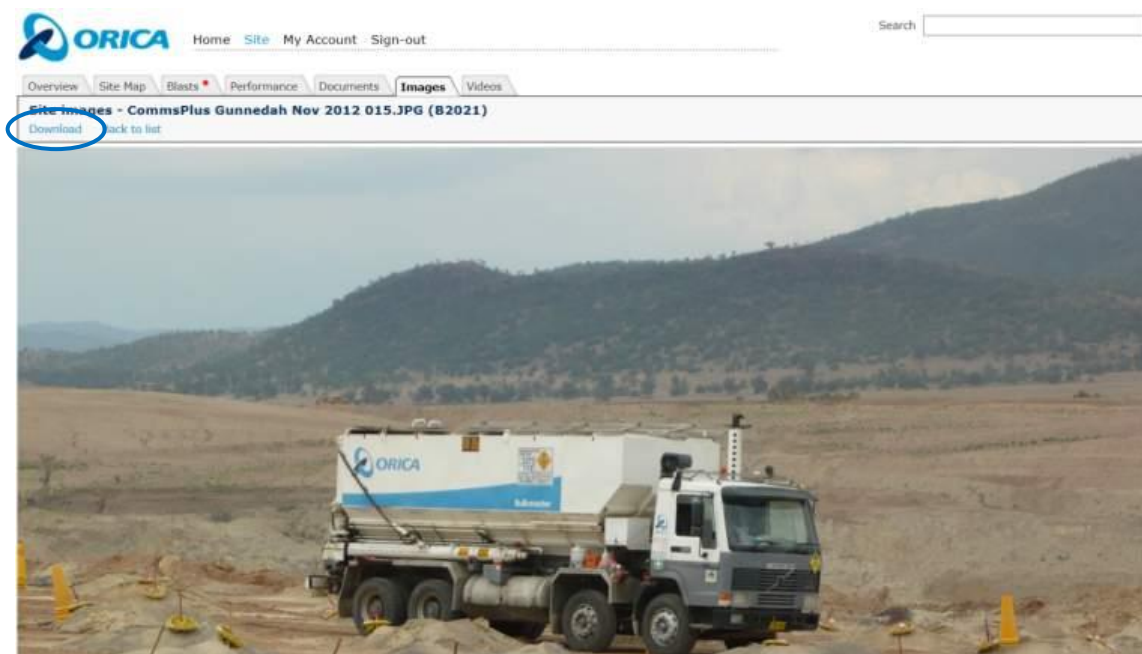
4.8 VIEWING THE SITE IMAGES

All **Images** associated with the site can be viewed and/or downloaded from here.

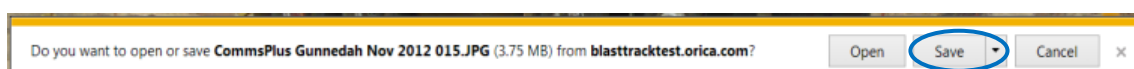
1. Select the **Images** tab.
2. Select the image to view by 'clicking' it.



3. To download the image, select **Download**.



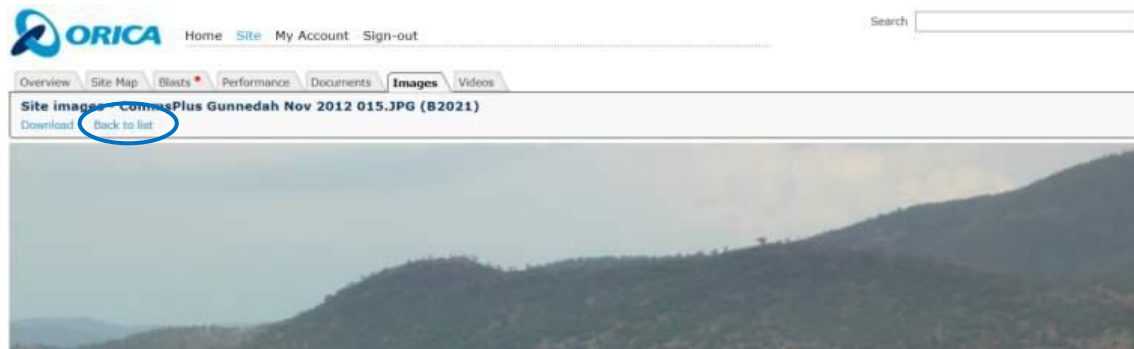
4. Select **Save**.



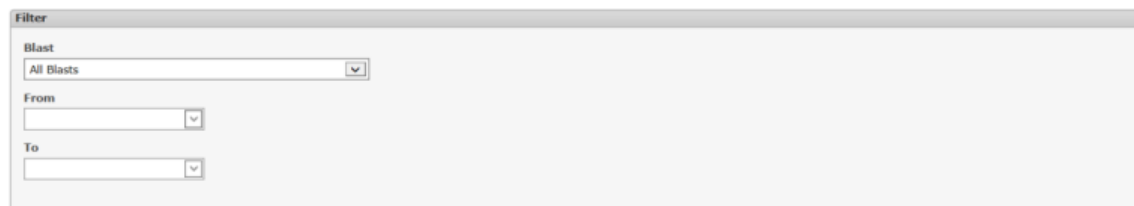
5. Close the dialog box.



6. To return to the **Images** starting page, select **Back to list**.



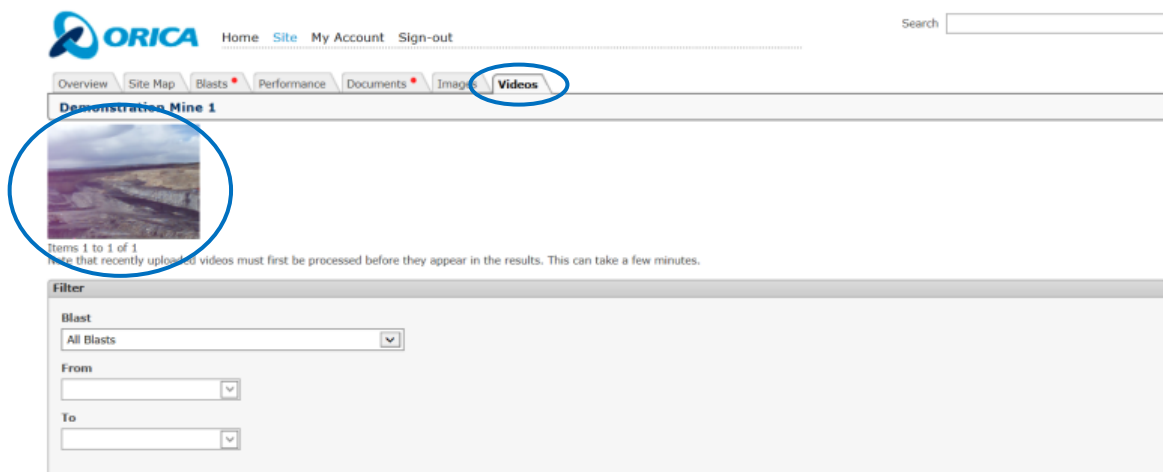
7. A **Filter** is available for the *Viewer* to select the **Blast**, date **From** and date **To** fields.



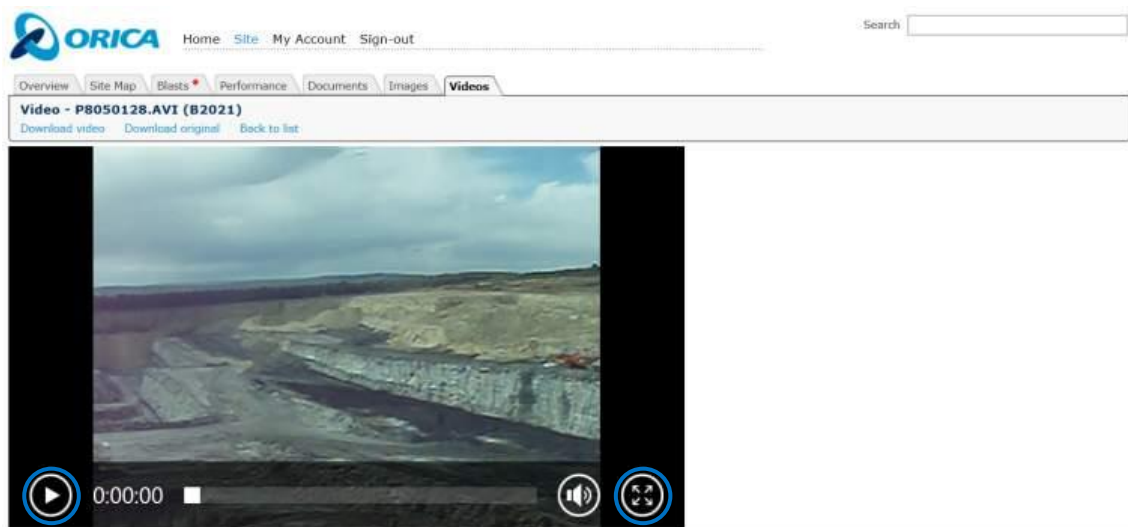
4.9 VIEWING THE SITE VIDEOS

All **Videos** associated with the site can be viewed and/or downloaded from here.

1. Select the **Videos** tab.
2. Select the video to view by 'clicking' it.



3. To view the video, select the ► (play) icon.
4. To make the video full screen, select the maximise icon.

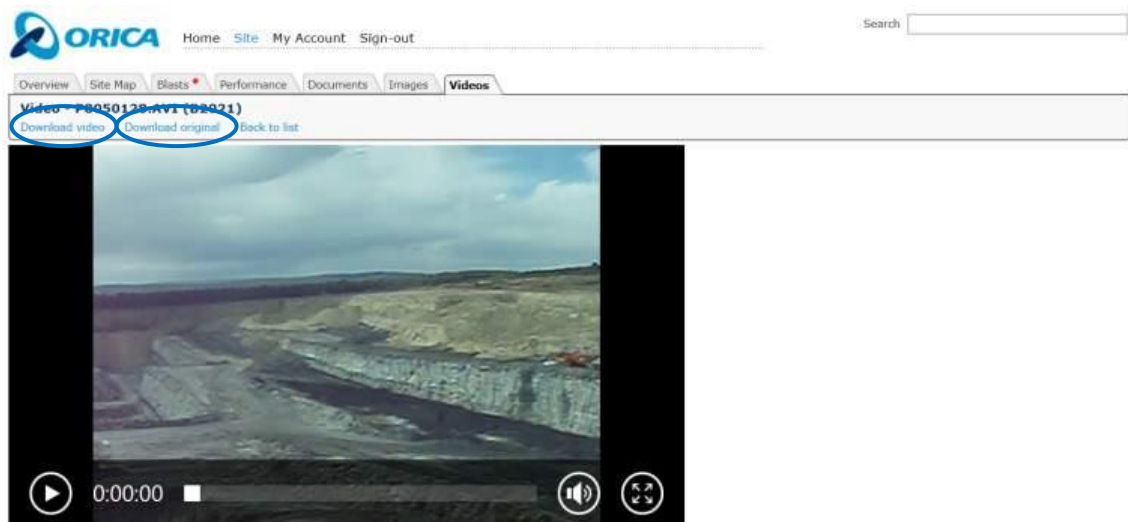


To view the video online (outside the BlastIQ system):

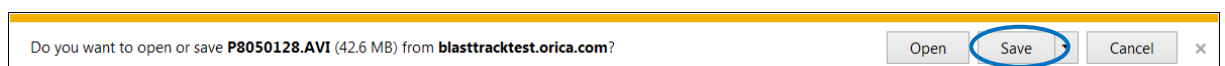
5. Select **Download video**.

To download the video,

6. Select **Download original**.



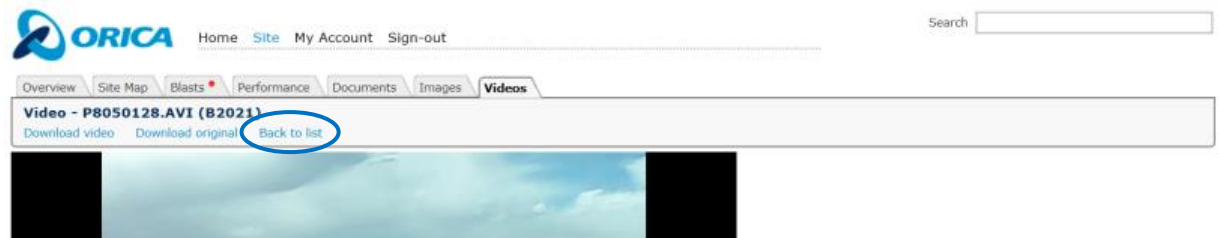
7. Select **Save**.



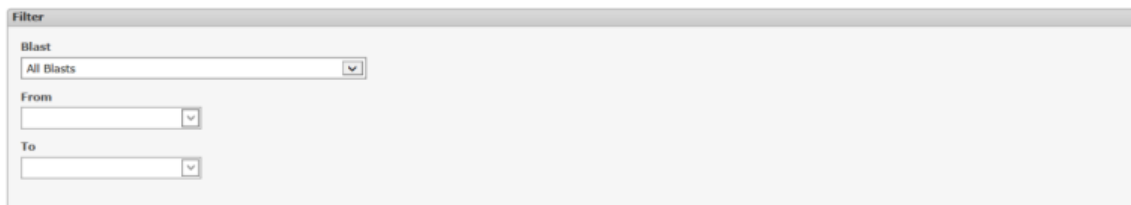
8. Close the dialog box.



9. To return to the **Videos** starting page, select **Back to list**.



10. A **Filter** is available for the *Viewer* to select the **Blast**, date **From** and date **To** fields.



5 USING BLASTIQ AS A CONTRIBUTOR

Section Revision: 0

Revision Date: November 2015

5.1 OVERVIEW

Contributors may view all blasting information restricted by the confidentiality provisions and add new documents to a site.

Contributors are able to perform all tasks from:

- Section 4 USING BLASTIQ AS A VIEWER

5.2 UPLOADING DOCUMENTS AND FILES

The Contributor is able to upload documents and files.

5.2.1 Uploading a Document from the Overview Tab

1. Select the **Overview** tab.
2. Select **Upload Document**.

The screenshot shows the ORICA BlastIQ web application interface. The top navigation bar includes links for Home, Site, My Account, and Sign-out. The 'Overview' tab is selected in the top navigation bar. The left sidebar shows the 'Actions menu' with 'Upload Document' highlighted. The main content area displays various site metrics and data.

Overview Tab - Demonstration Mine 1

Actions menu

- Upload Document

Site user access

User	Access
Alain Silic	Orica
Ben Wynn	Orica
Geoff Stevenson	Orica
hung.chau@orica.com	Orica
Konrad Schmidt	Orica
mark.living@adapa.com.au	Adapa
Rachel Purdie	Orica
Rohan Stevens	Orica
Scott Feeney	Orica

LoadPlus

LoadPlus site name: Active

LoadPlus updates: Active

Last update: 15/12/2015 2:38 PM

Next update: 15/12/2015 2:53 PM

Last product update: 15/12/2015 9:01 AM

System status: The blast association is invalid 15/12/2015 2:37 PM

File transfer folder

BlastTrack Technical Field Guide.docx 13/11/2015

Blasting Timeline

Timeline view showing dates from September 15 to January 15. A red star icon is visible on the timeline.

Blasting descriptors implemented

Blast Type: The type of blast categorized as per site procedure.

Blasting measures implemented

Excavator E05 Dig Rate (tne/hr): Dig rate for Hitachi 3500 number EX05.

Recent Activity

- 15/12/2015 - Blast TSB created by Loadplus
- 10/12/2015 - Blast REF2 created by Loadplus
- 10/12/2015 - Blast REF1 created by Loadplus
- 9/12/2015 - Blast ALISON TSB2 created by Loadplus
- 9/12/2015 - Blast ALISON STRATA created by Loadplus

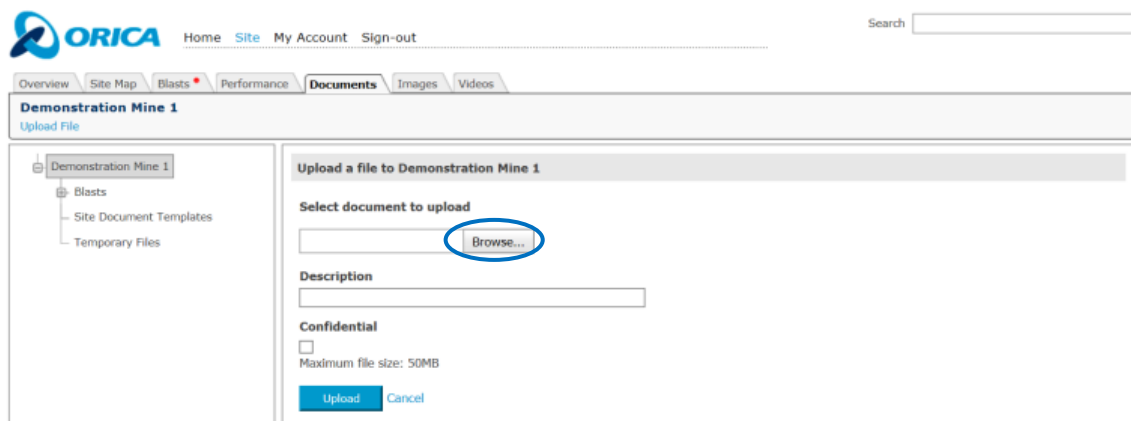
Monitoring points (POI)

Environmental 01

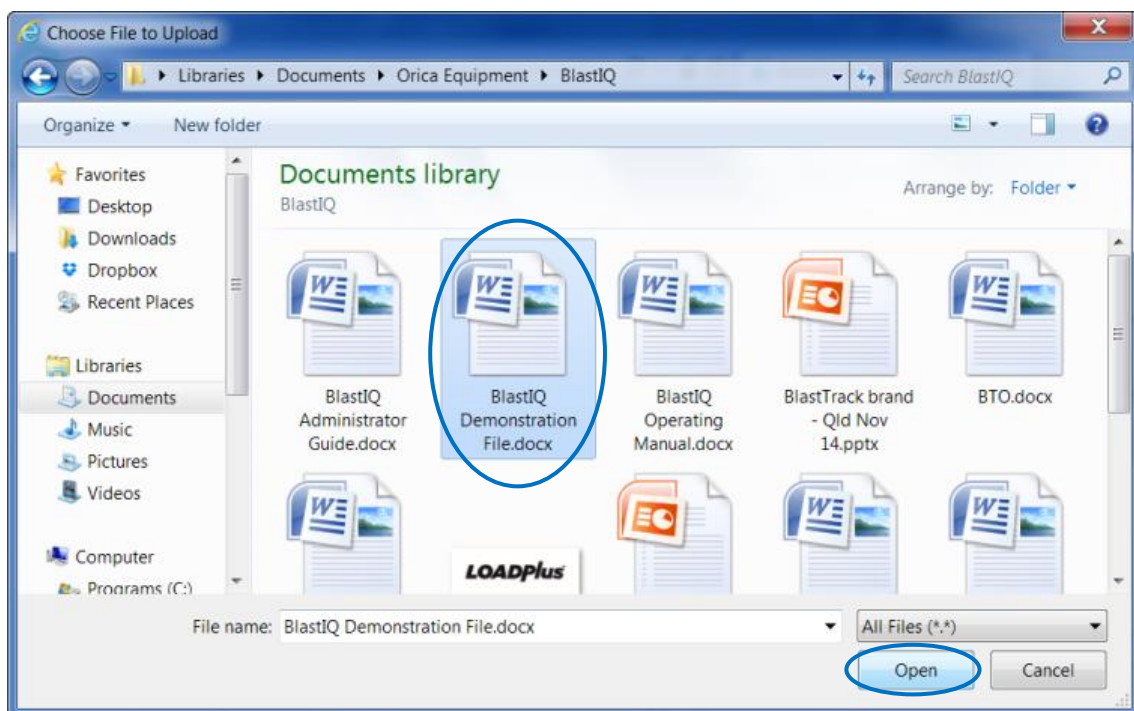
Open Blasts

- AAFIRST
- AASECOND
- AATHRD
- ALISON 11
- ALISON 12
- ALISON 13
- ALISON 13
- ALISON 6
- ALISON 8
- ALISON 9 PS
- ALISON STRATA
- ALISON TSB2
- ALISON10 TSB
- ALISON14
- B2021
- BAYSSP01
- BEN 4 DECK
- BEN NLOCK
- BEN TEST 02
- BEN01
- BENCFX
- BENNEW
- BENNOHOLES
- CAC2649BR
- CAN2745 TSB
- H2130
- HUN2335T
- HUN2738RL70
- MCW 2508 BA
- REF2
- REFR1
- TEST01
- TSB
- UAT_Test01

3. The system goes to the **Documents** area for the site.
4. Select **Browse...**



5. Locate the document to upload.
6. Select the file (it will become highlighted).
7. Select **Open**.



8. If required, enter a document description (optional).
9. If required, make the document **Confidential** by selecting the box (optional).
10. Select **Upload**.

The screenshot shows the ORICA BlastIQ web interface. The top navigation bar includes the ORICA logo, links for Home, Site, My Account, and Sign-out, and a search bar. Below the navigation bar, there are tabs for Overview, Site Map, Blasts, Performance, Documents, Images, and Videos. The 'Documents' tab is selected, and the page title is 'Demonstration Mine 1'. The main content area is titled 'Upload File' and contains a sidebar on the left with a tree view showing 'Demonstration Mine 1', 'Blasts', 'Site Document Templates', and 'Temporary Files'. The main area is titled 'Upload a file to Demonstration Mine 1' and contains a 'Select document to upload' section with a file name 'BlastIQ Demonstration f' and a 'Browse...' button. Below this, there is a 'Description' field with the text 'Document uploaded for Operating Manual demonstration', a 'Confidential' checkbox which is checked, and a note 'Maximum file size: 50MB'. At the bottom, there are 'Upload' and 'Cancel' buttons. Red circles highlight the 'Description' field, the 'Confidential' checkbox, and the 'Upload' button.

11. Successfully Uploaded message is displayed.

The screenshot shows the ORICA BlastIQ web interface after a successful upload. The top navigation bar and tabs are the same as in the previous screenshot. The 'Documents' tab is selected, and the page title is 'Demonstration Mine 1'. The main content area is titled 'Upload File'. A green success message is displayed at the top of the main area: 'BlastIQ Demonstration File.docx was successfully uploaded.'.

5.2.2 Uploading a File from the Overview Tab

Upload File is used for larger files. They are only temporarily stored. This allows users to transfer large files between themselves, to save outside the system.

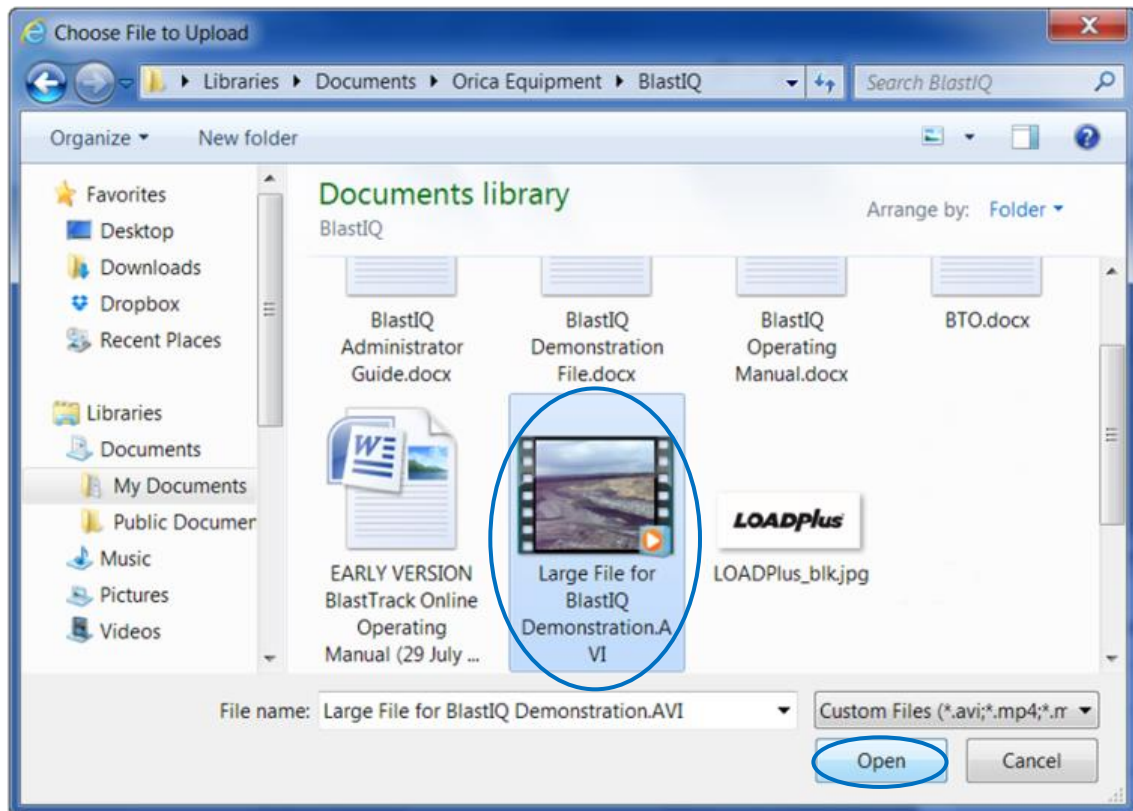
1. Select the **Overview** tab.
2. Select **Upload File**.

The screenshot shows the Orica BlastIQ web interface. The 'Overview' tab is highlighted in the top navigation bar. On the left sidebar, under the 'Actions menu', the 'Upload File' button is circled. The main content area shows details for 'Demonstration Mine 1', including a list of site users, LoadPlus site information, a blasting timeline, implemented descriptors and measures, recent activity, and a list of monitoring points (POI) with associated open blasts.

3. Select **Browse...**

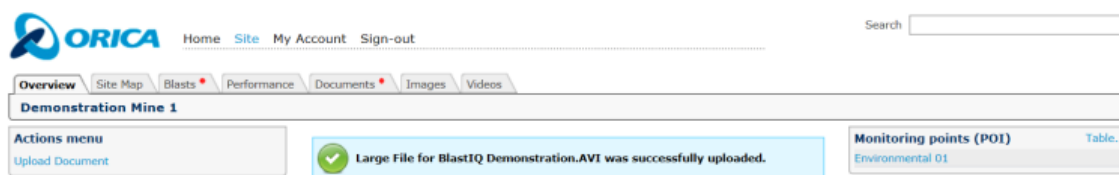
This is a dialog box titled 'Demonstration Mine 1 temporary files'. It contains a section 'Select document to upload' with a text input field and a 'Browse...' button. Below this is a 'Description' text input field, a 'Confidential' checkbox, and the text 'Maximum file size: 50MB'. At the bottom, there are 'Upload' and 'Cancel' buttons.

4. Locate the document to upload.
5. Select the file (it will become highlighted).
6. Select **Open**.



7. If required, enter a document description (optional).
8. If required, make the document **Confidential** by selecting the box (optional).
9. Select **Upload**.

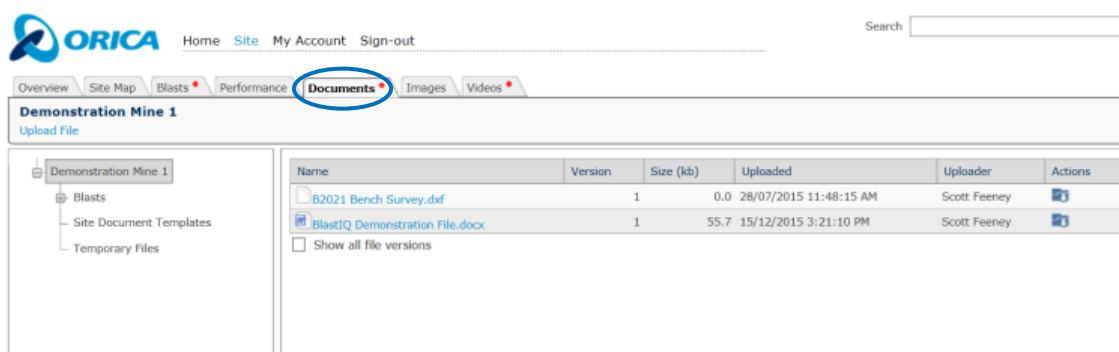
10. Successfully Uploaded message is displayed.



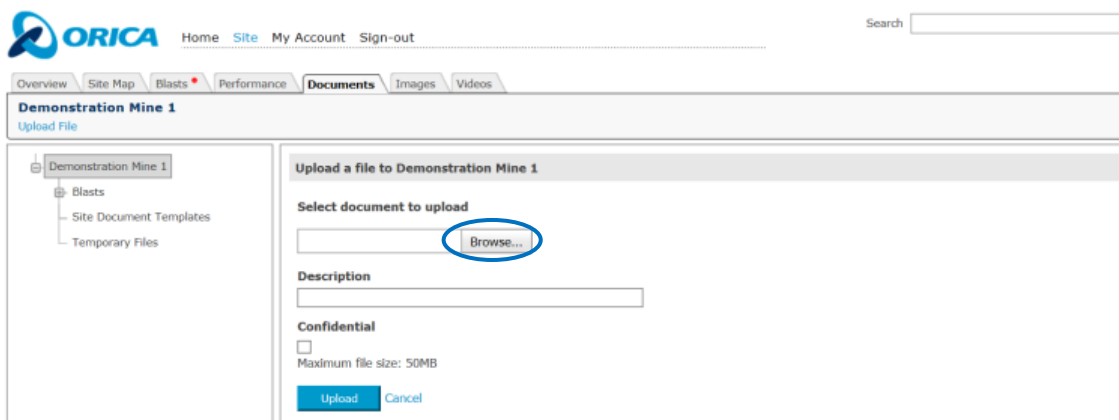
5.3 UPLOADING A FILE IN DOCUMENTS

Contributors can **Upload Files** from the **Documents** tab.

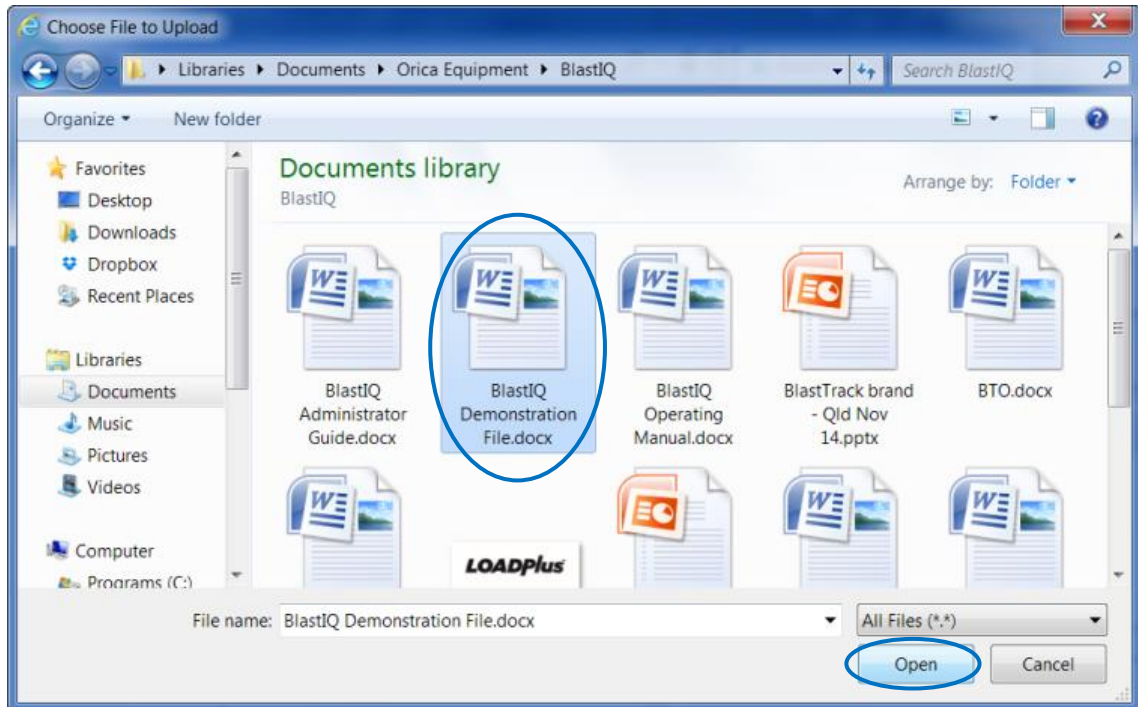
1. Select the **Documents** tab.



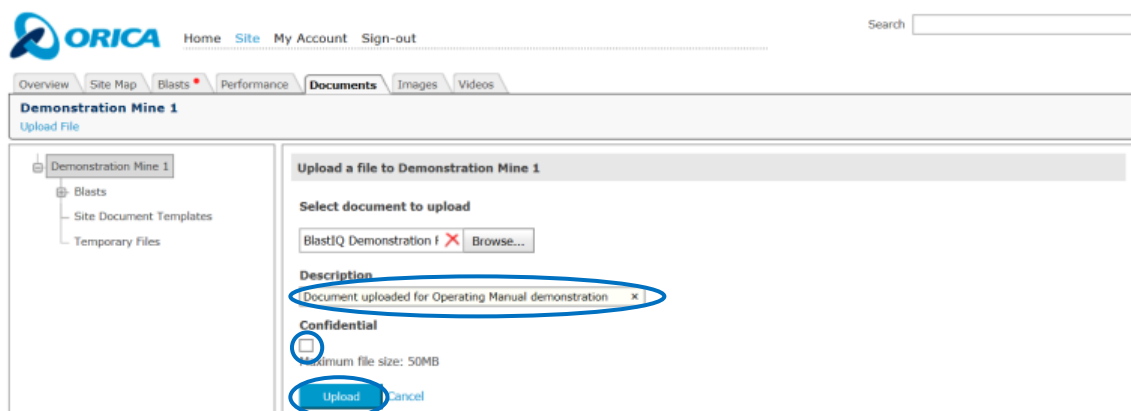
2. Select **Browse...**



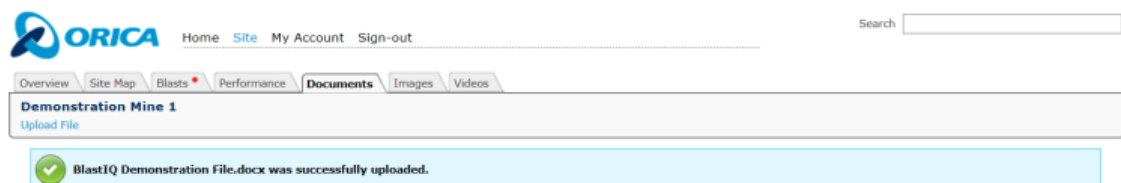
3. Locate the document to upload.
4. Select the file (it will become highlighted).
5. Select **Open**.



6. If required, enter a document description (optional).
7. If required, make the document **Confidential** by selecting the box (optional).
8. Select **Upload**.



9. Successfully Uploaded message is displayed.



6 USING BLASTIQ AS AN EDITOR

Section Revision: 0

Revision Date: August 2015

6.1 OVERVIEW

Editors may view and edit all blasting information at a site subject to the confidentiality provisions.

Editors are able to perform all tasks from:

- Section 4 USING BLASTIQ AS A VIEWER
- Section 5 USING BLASTIQ AS A CONTRIBUTOR

Editor access is recommended for most users at a site that are involved in the blasting process, such as Engineers, Supervisors, Shotfirers and Surveyors.

6.2 EDITING SITE INFORMATION

Access to sites on BlastIQ is available in three ways:

- Selecting the **site** hyperlink listed under *Sites and open blasts*
- Selecting the appropriate **red dot** (site location) on the map
- Selecting **Site** / site name

The screenshot shows the BlastIQ web application interface. At the top, the Orica logo is on the left, and navigation links for Home, Site (circled), My Account, and Sign-out are in the center. A search bar is on the right. Below the navigation bar, a welcome message for Scott Feeney is displayed. The main content area is divided into several sections: a left sidebar with 'News', 'Only 1 user online', and 'Job Queue'; a central map of Australia with a red dot indicating a site location; and a right sidebar with 'Sites and open blasts' (circled) showing a link to 'Demonstration Mine 1'. Below the map, there are sections for 'Recent Notifications' and 'Recent Activity'.

The site homepage is displayed.

The screenshot shows the Orica BlastIQ web application interface. At the top, the Orica logo is on the left, and navigation links for Home, Site, My Account, and Sign-out are in the center. A search bar is on the right. Below the navigation bar, a tabbed menu shows Overview (selected), Site Map, Blasts, Performance, Documents, Images, and Videos. The main content area is titled "Demonstration Mine 1". It features several sections: "Actions menu" with links like "Create blast" and "View points of interest"; "Site user access" listing Rachel Purdie and Scott Feeney; "File transfer folder" showing no recent uploads; "Blasting Timeline" with a calendar view from March 15 to August; "Blasting descriptors implemented" explaining blast types; "Blasting measures implemented" listing excavator and dig rates; "Monitoring points (POI)" showing "Environmental 01"; "Open Blasts" showing "No open blasts"; and "Recent Activity" with a log of recent updates.

6.3 CREATING AND EDITING POINTS OF INTEREST

Points of interest describe any point or feature that needs to be noted on the site map. These can be:

- Facilities (offices, processing plant, sensitive structures)
- Survey stations
- Environmental monitors

If the site manager has enabled “Environmental monitoring” in **Optional Features** (see Section 7.2.2), environmental monitors must be defined as points of interest to display data.

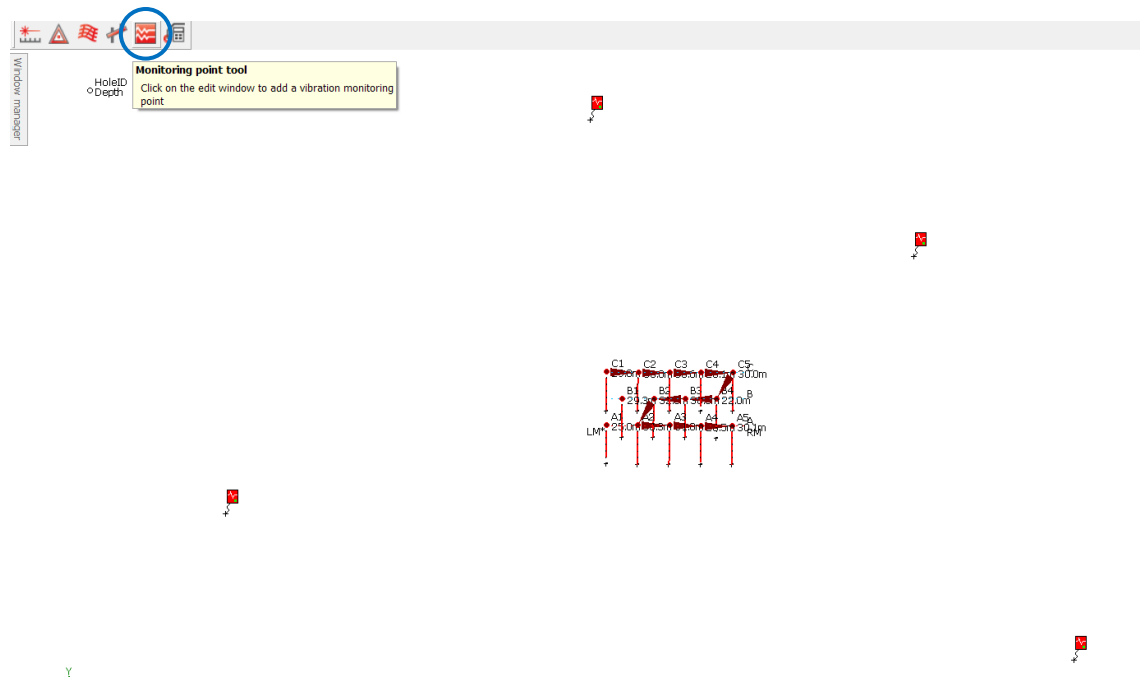
6.3.1 Uploading Points of Interest from a SHOTPlus5™ File

Points can be added to a SHOTPlus5™ file and then exported into BlastIQ as a .poi file.

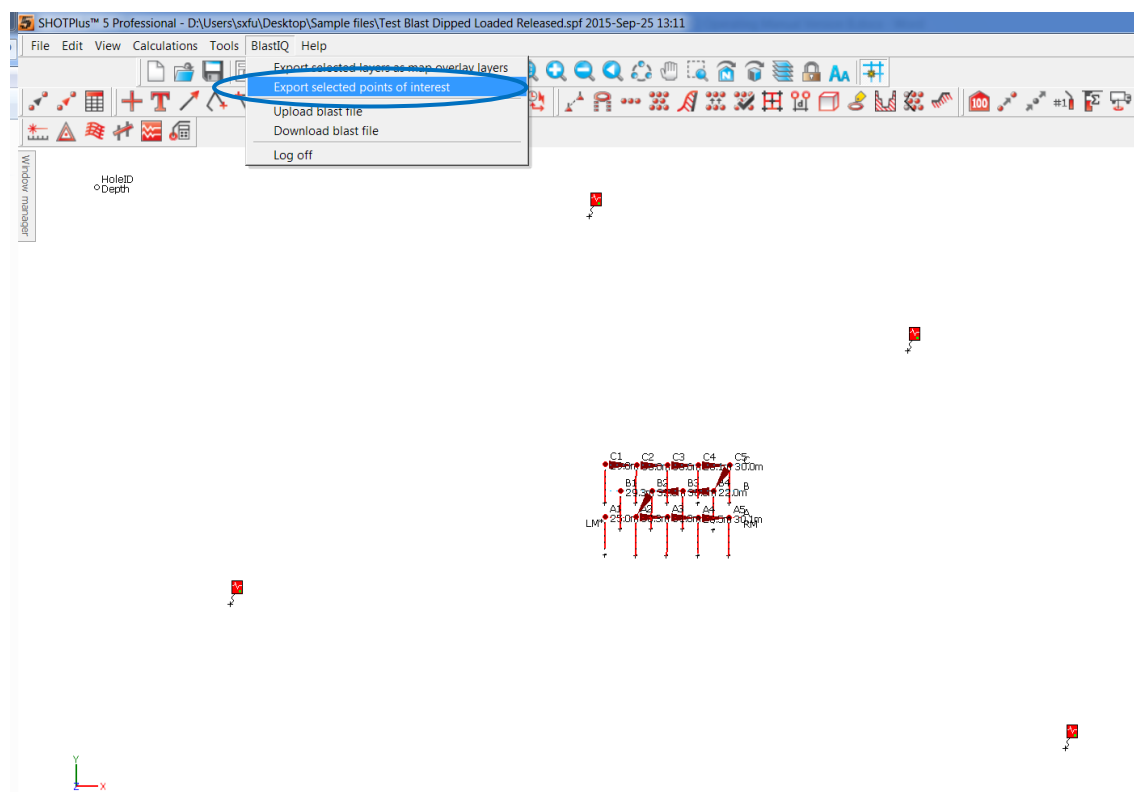
1. Open a SHOTPlus file in the location of the site.

2. Add points of interest using . Label points using .

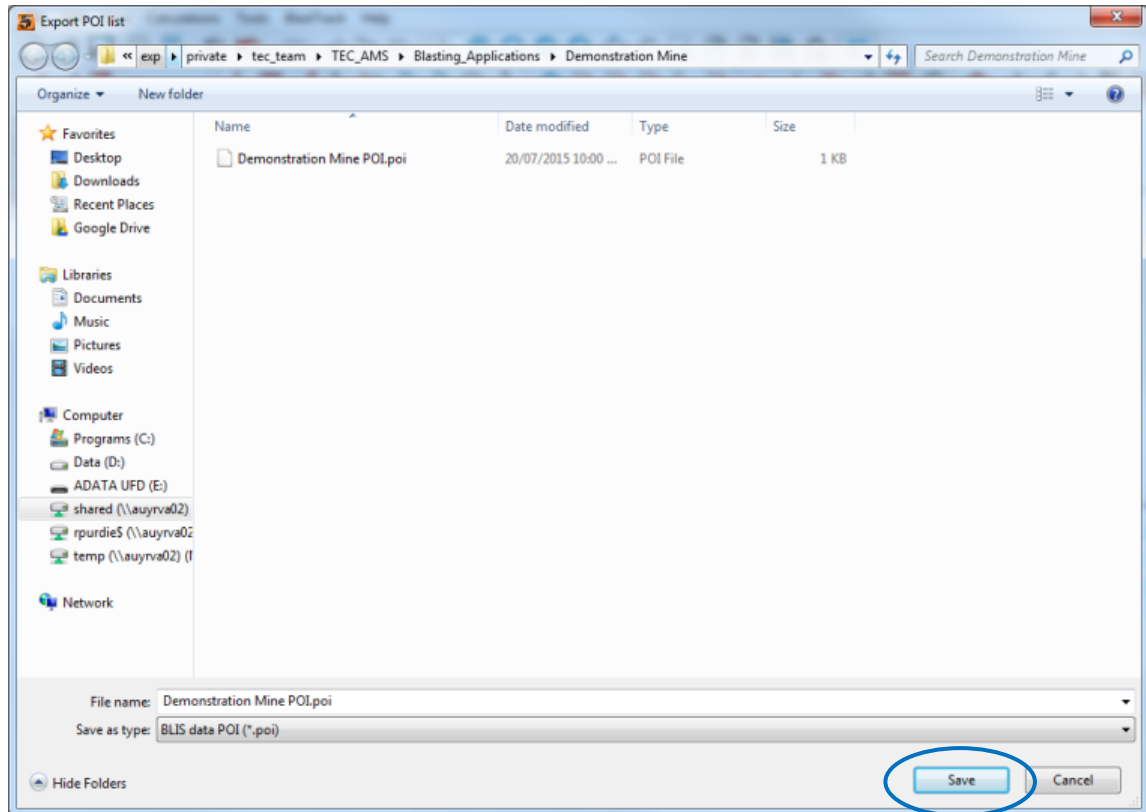
For environmental monitors use .



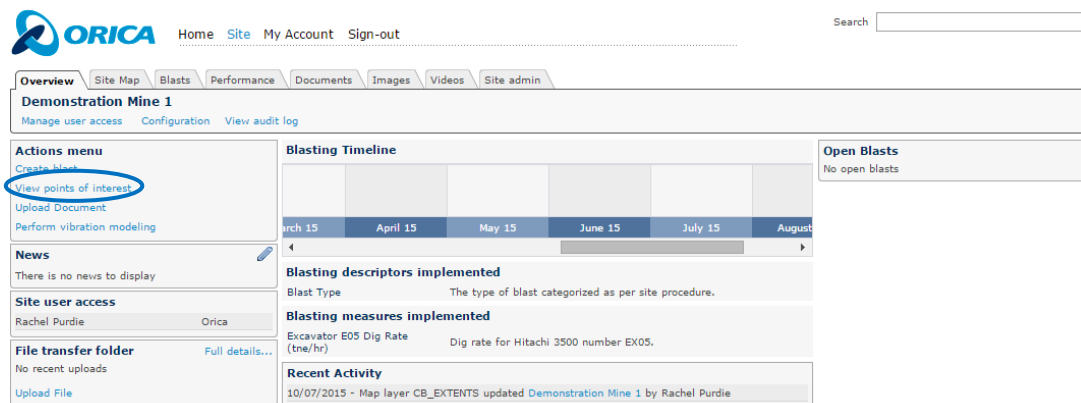
3. Select all points and click **BlastIQ / Export selected points of interest**.



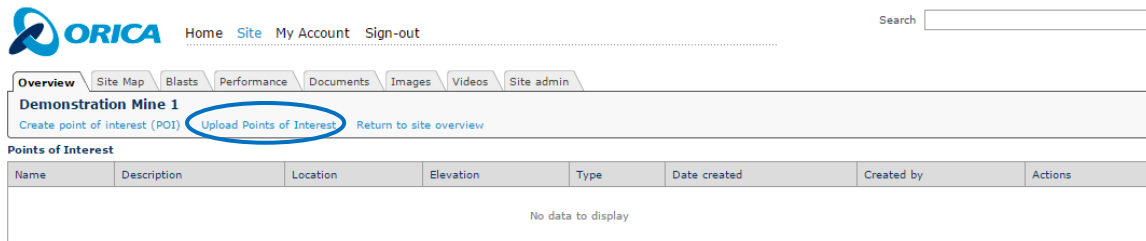
4. Save the .poi file in the appropriate folder.



5. From the site overview page, select **View points of interest**.

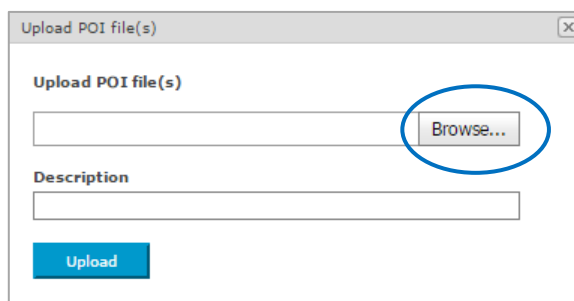


6. If points of interest have been defined in a SHOTPlus5™ file, select **Upload Points of Interest**.



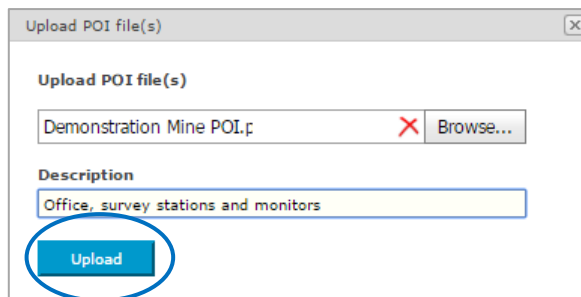
The screenshot shows the ORICA web application interface. At the top, there is a navigation bar with links: Home, Site, My Account, and Sign-out. Below this is a search bar. The main content area has a tabbed interface with tabs: Overview, Site Map, Blasts, Performance, Documents, Images, Videos, and Site admin. The 'Overview' tab is selected, showing 'Demonstration Mine 1'. Under this, there are three links: 'Create point of interest (POI)', 'Upload Points of Interest' (circled in blue), and 'Return to site overview'. Below the links is a table titled 'Points of Interest' with columns: Name, Description, Location, Elevation, Type, Date created, Created by, and Actions. The table is currently empty, displaying 'No data to display'.

7. **Browse** for the saved .poi file.



The screenshot shows the 'Upload POI file(s)' dialog box. It has a title bar with a close button. Inside, there is a section titled 'Upload POI file(s)' with a text input field and a 'Browse...' button (circled in blue). Below this is a 'Description' section with a text input field. At the bottom, there is a blue 'Upload' button.

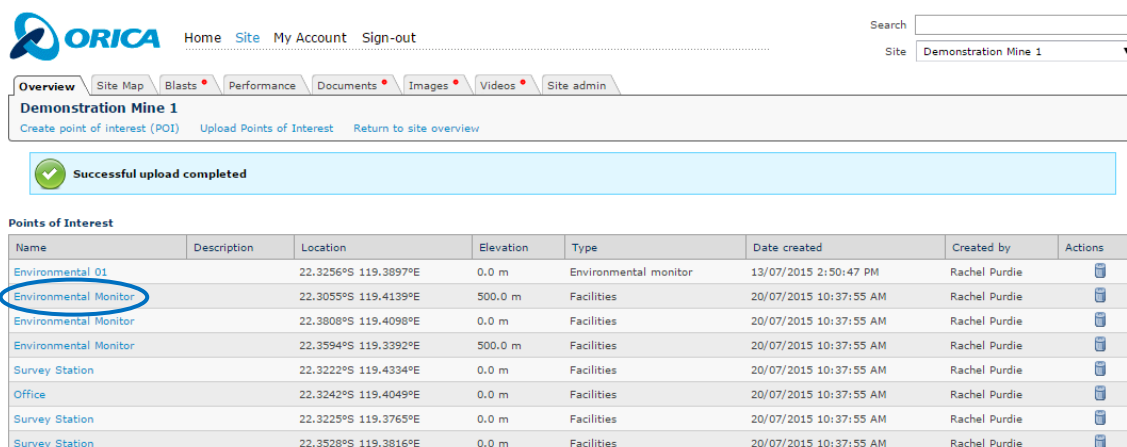
8. Add a description if required and click **Upload**.



The screenshot shows the 'Upload POI file(s)' dialog box. The 'Upload POI file(s)' section now shows a file named 'Demonstration Mine POI.p' with a red 'X' icon and a 'Browse...' button. The 'Description' section now contains the text 'Office, survey stations and monitors'. The 'Upload' button at the bottom is circled in blue.

The points will now be displayed in list form.

9. Change the **Type** of point by clicking on the **Name**.



ORICA Home Site My Account Sign-out

Search

Site Demonstration Mine 1

Overview Site Map Blasts Performance Documents Images Videos Site admin

Demonstration Mine 1

Create point of interest (POI) Upload Points of Interest Return to site overview

Successful upload completed

Points of Interest

Name	Description	Location	Elevation	Type	Date created	Created by	Actions
Environmental 01		22.3256°S 119.3897°E	0.0 m	Environmental monitor	13/07/2015 2:50:47 PM	Rachel Purdie	
Environmental Monitor		22.3055°S 119.4139°E	500.0 m	Facilities	20/07/2015 10:37:55 AM	Rachel Purdie	
Environmental Monitor		22.3808°S 119.4098°E	0.0 m	Facilities	20/07/2015 10:37:55 AM	Rachel Purdie	
Environmental Monitor		22.3594°S 119.3392°E	500.0 m	Facilities	20/07/2015 10:37:55 AM	Rachel Purdie	
Survey Station		22.3222°S 119.4334°E	0.0 m	Facilities	20/07/2015 10:37:55 AM	Rachel Purdie	
Office		22.3242°S 119.4049°E	0.0 m	Facilities	20/07/2015 10:37:55 AM	Rachel Purdie	
Survey Station		22.3225°S 119.3765°E	0.0 m	Facilities	20/07/2015 10:37:55 AM	Rachel Purdie	
Survey Station		22.3528°S 119.3816°E	0.0 m	Facilities	20/07/2015 10:37:55 AM	Rachel Purdie	

10. Click on the **Edit** icon next to **Details**.



ORICA Home Site My Account Sign-out

Search

Site Demonstration Mine 1

Overview Site Map Blasts Performance Documents Images Videos Site admin

View point of interest details - Survey Station

Edit View points of interest Return to site overview Apply current limits to historical data

Details Notes

Name: Survey Station

Type: Facilities

Location: 22.3531°S 119.3824°E

Elevation: 0.0 m

Easting: 745352.9 m

Northing: 7526149.4 m

Created by: Rachel Purdie

Date created: 20/07/2015

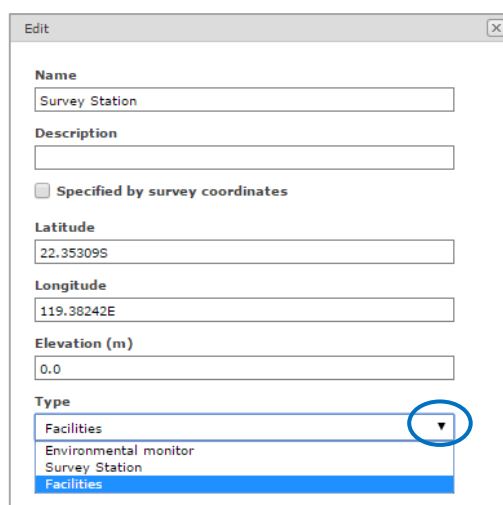
AVM configuration

Not available

NCVIB

Not available

11. Change the **Type** of point from the drop down list.



Edit

Name: Survey Station

Description:

☐ Specified by survey coordinates

Latitude: 22.35309S

Longitude: 119.38242E

Elevation (m): 0.0

Type:

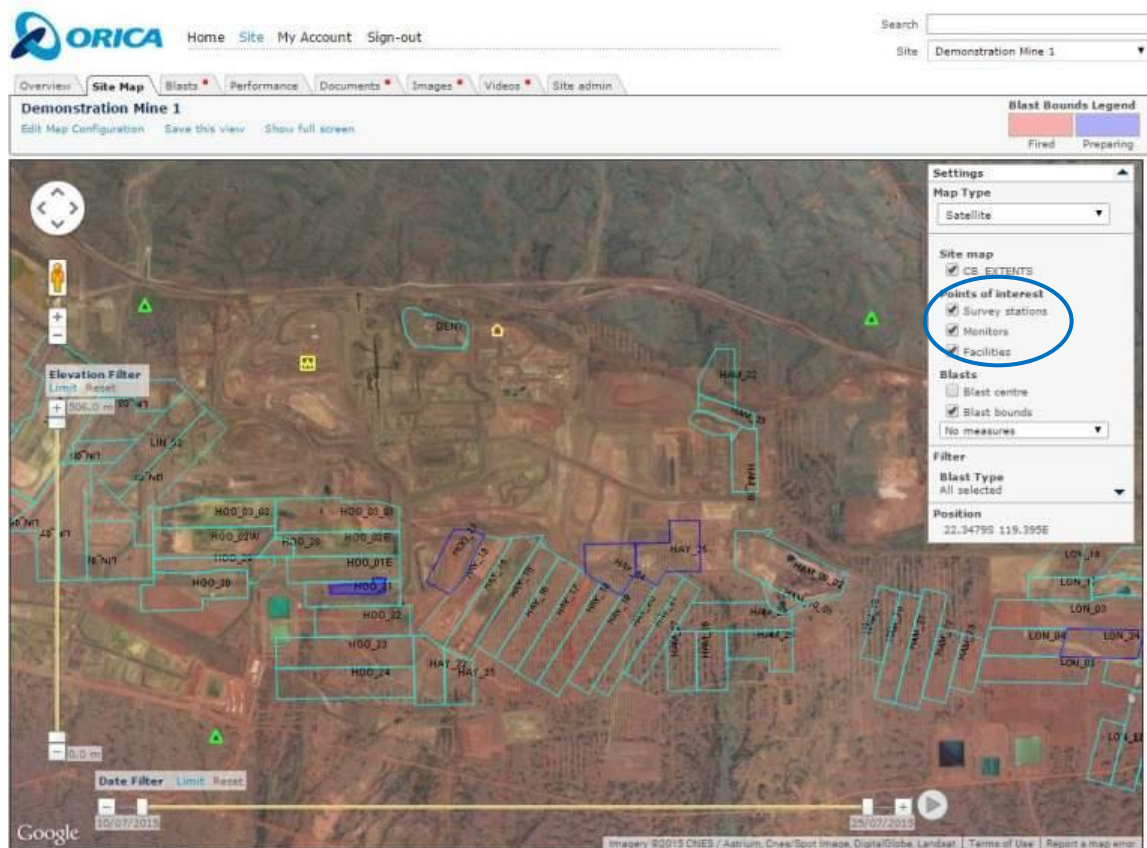
Facilities

Environmental monitor

Survey Station

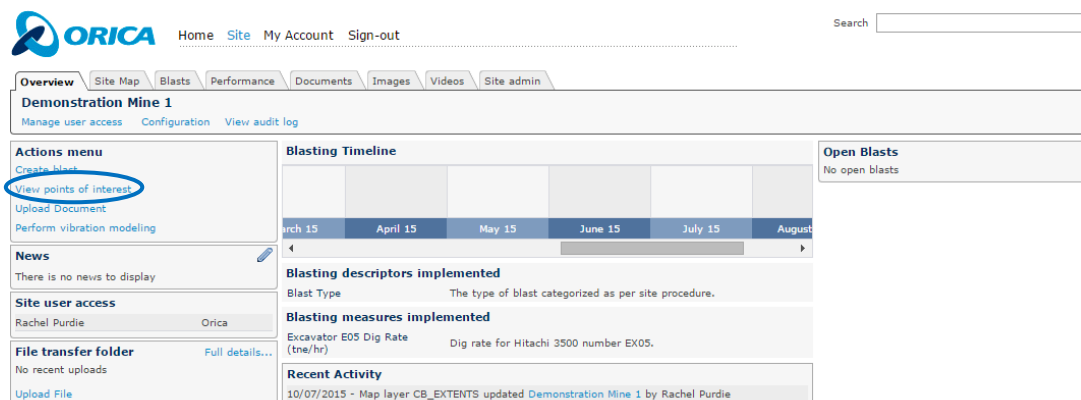
Facilities

The points will now be visible on the site map. They may be hidden or shown using the tick boxes.



6.3.2 Creating Points of Interest in BlastIQ

1. From the site overview page, select **View points of interest**.



2. To create a point of interest, select **Create point of interest (POI)**.

The screenshot shows the ORICA BlastIQ web application. The top navigation bar includes the ORICA logo, a search bar, and links for Home, Site, My Account, and Sign-out. Below this is a secondary navigation bar with tabs for Overview, Site Map, Blasts, Performance, Documents, Images, Videos, and Site admin. The 'Overview' tab is active, showing a 'Demonstration Mine 1' header. Under this header, the 'Create point of interest (POI)' link is circled in blue. Other links include 'Upload Points of Interest' and 'Return to site overview'. Below the links is a table titled 'Points of Interest' with columns: Name, Description, Location, Elevation, Type, Date created, Created by, and Actions. The table is currently empty, displaying 'No data to display'.

3. Enter in the point **Name** and **Description**. By default it will prompt for coordinates in Latitude/Longitude, however this can be changed to easting/northing by selecting the tick box **Specified by survey coordinates**.

Select the **Type** of point from the drop down box as either **Environmental monitor**, **Survey station**, or **Facilities**.

- **Environmental monitor** will prompt for additional information when editing (see Section 6.3.3).
- **Survey station** are for display only on the map
- **Facilities** is used for sensitive structures, and every blast that is created will calculate its distance to each facility.

The screenshot shows the 'Add point of interest' dialog box. It contains the following fields and controls:

- Name**: Text input field.
- Description**: Text input field.
- ☐ **Specified by survey coordinates**: A checkbox that is circled in blue.
- Latitude**: Text input field.
- Longitude**: Text input field.
- Elevation (m)**: Text input field.
- Type**: A dropdown menu with 'Environmental monitor' selected. The dropdown arrow is circled in blue.
- Create point of interest (POI)**: A blue button.
- Cancel**: A text button.

4. Once information has been entered, select **Update**.

Edit

Name
Environmental 01

Description

☐ Specified by survey coordinates

Latitude
22.32558S

Longitude
119.38968E

Elevation (m)
0.0

Type
Environmental monitor

Update Cancel

5. Points of interested are then added in list form.

ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos Site admin

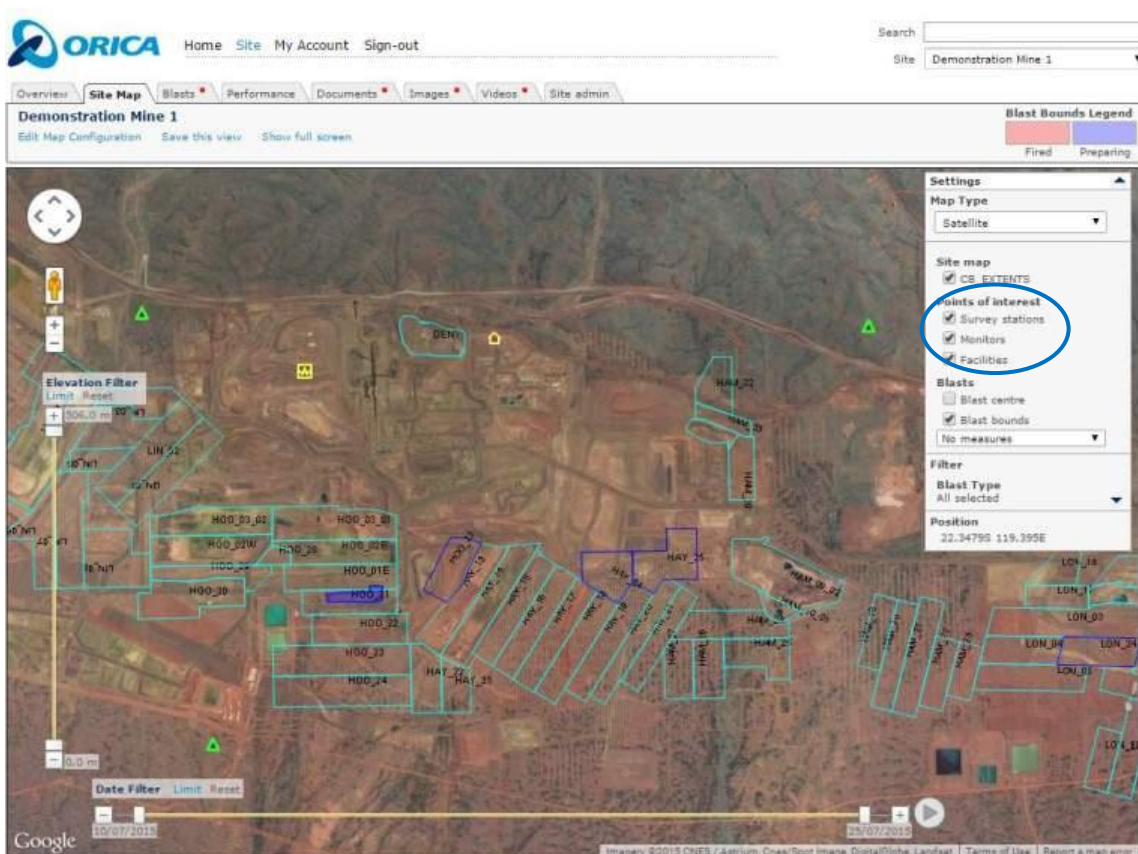
Demonstration Mine 1

Create point of interest (POI) Upload Points of Interest Return to site overview

Points of Interest

Name	Description	Location	Elevation	Type	Date created	Created by	Actions
Environmental 01		22.3256°S 119.3897°E	0.0 m	Environmental monitor	13/07/2015 2:50:47 PM	Rachel Purdie	

The points will now be visible on the site map. They may be hidden or shown using the tick boxes.



6.3.3 Configuring Environmental Monitors

1. View details and edit a point of interest by clicking on the **Name**.



ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos Site admin

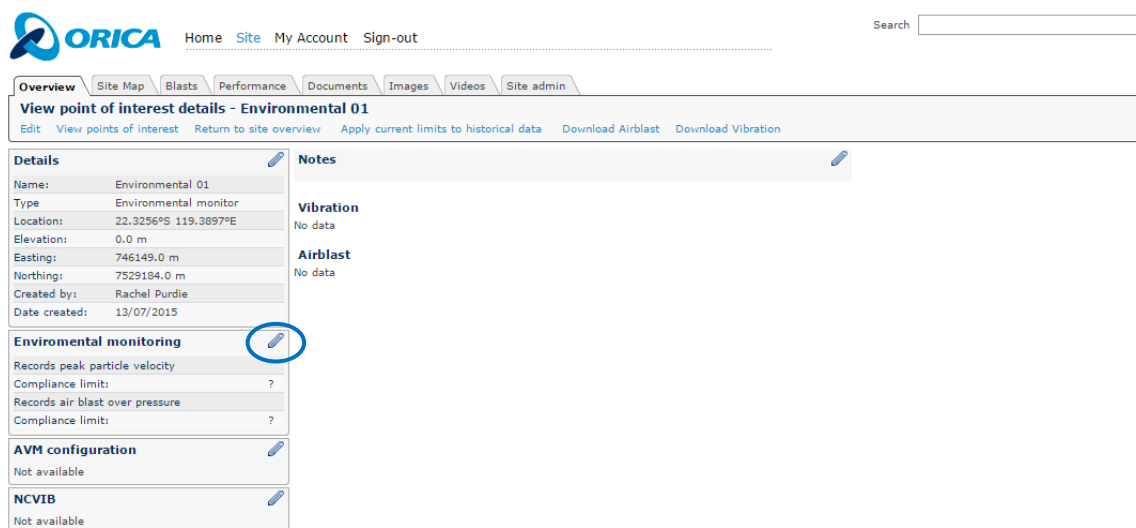
Demonstration Mine 1

Create point of interest (POI) Upload Points of Interest Return to site overview

Points of Interest

Name	Description	Location	Elevation	Type	Date created	Created by	Actions
Environmental 01		22.3256°S 119.3897°E	0.0 m	Environmental monitor	13/07/2015 2:50:47 PM	Rachel Purdie	

2. Select the edit icon next to **Environmental monitoring**.



ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos Site admin

View point of interest details - Environmental 01

Edit View points of interest Return to site overview Apply current limits to historical data Download Airblast Download Vibration

Details

Name: Environmental 01

Type: Environmental monitor

Location: 22.3256°S 119.3897°E

Elevation: 0.0 m

Easting: 746149.0 m

Northing: 7529184.0 m

Created by: Rachel Purdie

Date created: 13/07/2015

Environmental monitoring

Records peak particle velocity

Compliance limit: ?

Records air blast over pressure

Compliance limit: ?

AVM configuration

Not available

NCVIB

Not available

Notes

Vibration

No data

Airblast

No data

3. Select to monitor vibration, air blast or both at this point and set up compliance and alert limits.
 - Blast results over the **Compliance limit** will appear red on the site map.
 - Blast results over the **Alert threshold** will appear yellow on the site map.
 - Blast results under both the **Compliance limit** and **Alert threshold** will appear green on the site map

Edit point of interest enviromental settings

☒ Monitoring point measures PPV

Site PPV compliance limit (mm/s)

Site PPV alert threshold (optional) (mm/s)

☒ Monitoring point measures air blast over pressure

Site air blast over pressure compliance limit (dBI)

Site air blast alert threshold (optional) (dBI)

Map display palette

Blue gradient

Update Cancel

4. Select **Update** once the information has been entered.

Edit point of interest enviromental settings

☒ Monitoring point measures PPV

Site PPV compliance limit (mm/s)

10

Site PPV alert threshold (optional) (mm/s)

7

☒ Monitoring point measures air blast over pressure

Site air blast over pressure compliance limit (dBI)

125

Site air blast alert threshold (optional) (dBI)

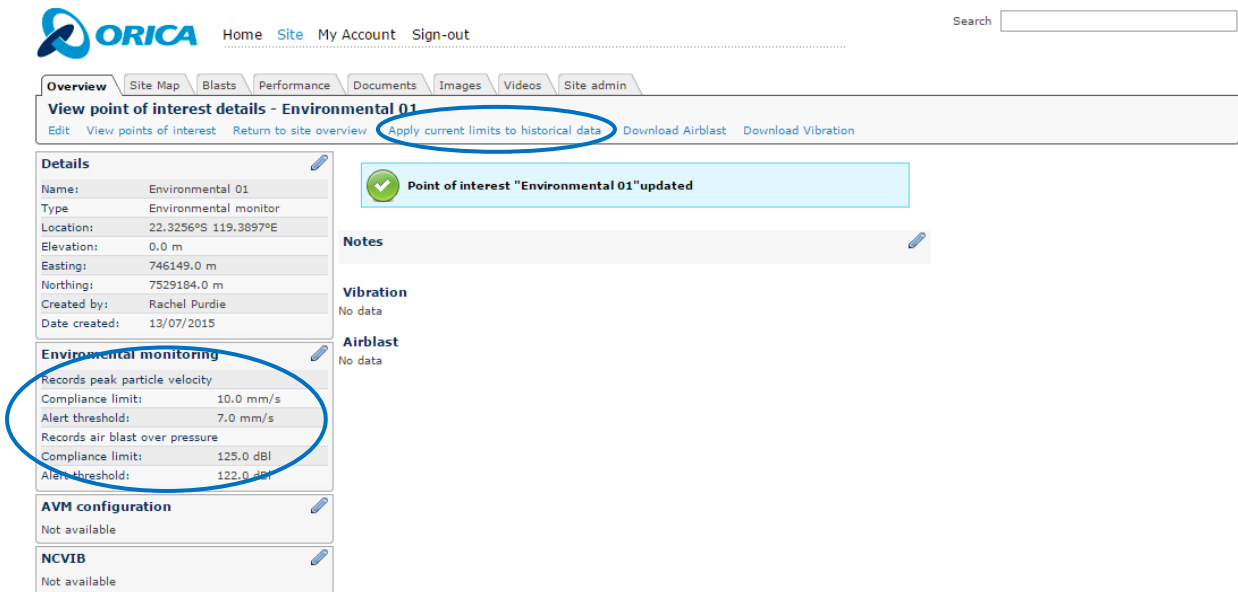
122

Map display palette

Blue gradient

Update Cancel

The information will then be added to the **View points of interest details** page. If compliance and alert limits are adjusted, only blasts uploaded after that point will be affected. If the new limits are to be applied to all historical data, select **Apply current limits to historical data**.



The screenshot shows the ORICA BlastIQ web application interface. At the top, there is a navigation bar with links for Home, Site, My Account, and Sign-out. Below this is a search bar. The main navigation menu includes Overview, Site Map, Blasts, Performance, Documents, Images, Videos, and Site admin. The current page is titled 'View point of interest details - Environmental 01'. Below the title, there are several links: Edit, View points of interest, Return to site overview, **Apply current limits to historical data** (circled in blue), Download Airblast, and Download Vibration. The left sidebar contains sections for Details, Environmental monitoring (circled in blue), AVM configuration, and NCVIB. The main content area shows a success message: 'Point of interest "Environmental 01" updated'. Below this, there are sections for Notes, Vibration, and Airblast, all of which currently show 'No data'.

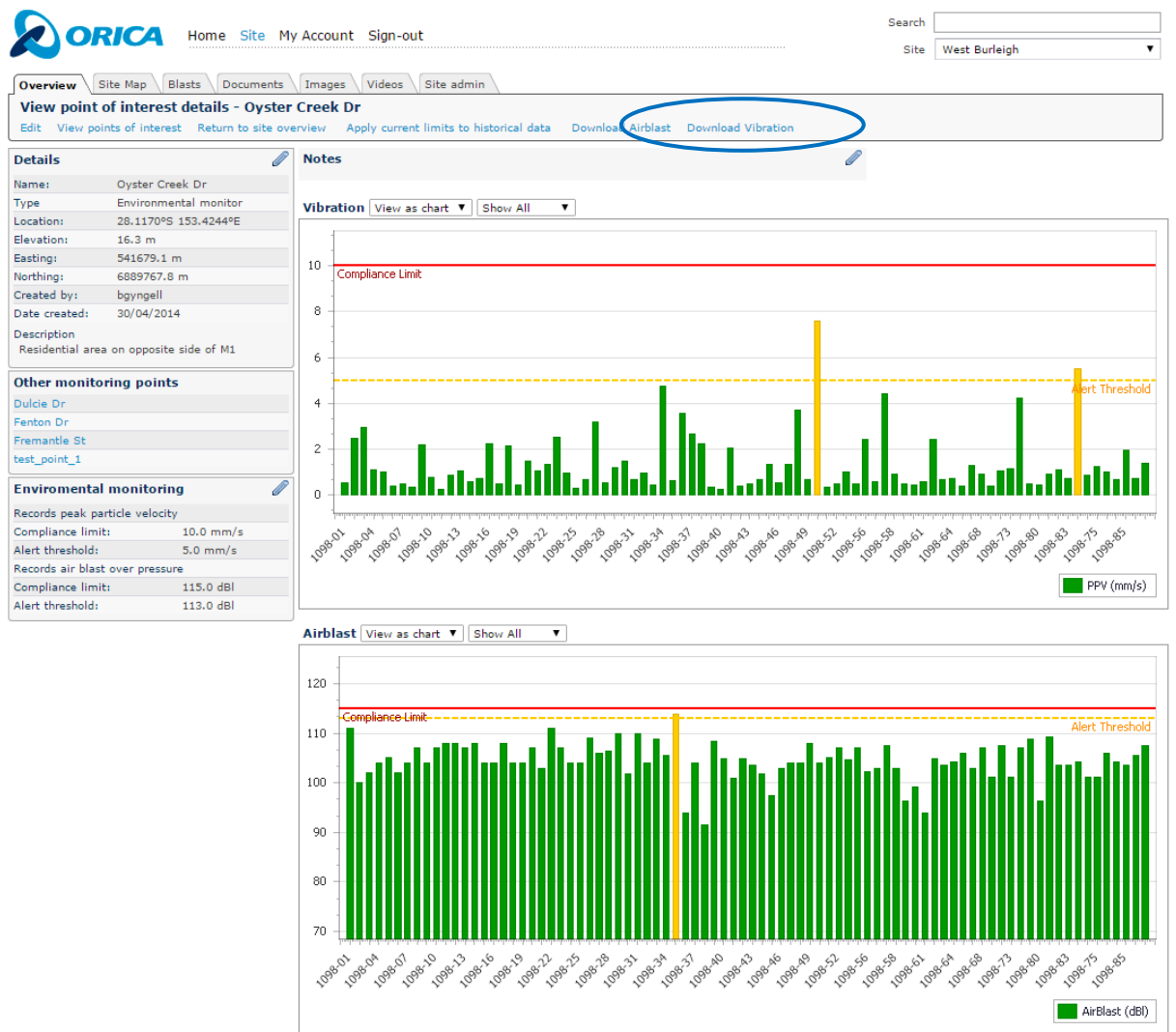
Details	
Name:	Environmental 01
Type:	Environmental monitor
Location:	22.3256°S 119.3897°E
Elevation:	0.0 m
Easting:	746149.0 m
Northing:	7529184.0 m
Created by:	Rachel Purdie
Date created:	13/07/2015

Environmental monitoring	
Records peak particle velocity	
Compliance limit:	10.0 mm/s
Alert threshold:	7.0 mm/s
Records air blast over pressure	
Compliance limit:	125.0 dBI
Alert threshold:	122.0 dBI

AVM configuration	
Not available	

NCVIB	
Not available	

After data is entered, more information will appear on the page including graphs and tables. Select **Download Airblast** and **Download Vibration** to extract all data from the point of interest as a .csv file.



NOTICE

The AVM and NCVB configuration is currently not available.

6.4 CREATING NEW BLASTS

1. Select the **Blasts** tab.

The screenshot shows the ORICA BlastIQ web application. The top navigation bar includes 'Home', 'Site', 'My Account', and 'Sign-out'. A search bar is on the right. The main navigation tabs are 'Overview', 'Site Map', 'Blasts', 'Performance', 'Documents', 'Images', and 'Videos'. The 'Blasts' tab is highlighted with a blue circle. Below the tabs, the page title is 'Demonstration Mine 1'. The left sidebar contains sections: 'Actions menu' (Create blast, View points of interest, Upload Document, Perform vibration modeling), 'Site user access' (Rachel Purdie, Scott Feeney), and 'File transfer folder' (No recent uploads, Upload File). The main content area is divided into three columns. The first column shows a 'Blasting Timeline' with a calendar view from March 15 to August. The second column shows 'Blasting descriptors implemented' (Blast Type) and 'Blasting measures implemented' (Excavator E05 Dig Rate, Dig rate for Hitachi 3500 number EX05). The third column shows 'Monitoring points (POI)' (Environmental 01) and 'Open Blasts' (No open blasts). A 'Recent Activity' section at the bottom lists recent actions.

2. Select **Create Blast**.

The screenshot shows the ORICA BlastIQ web application with the 'Blasts' tab selected. The 'Blast list' section is highlighted with a blue circle. It contains a 'Create Blast' button and a 'Reset filters' link. Below these are filters for 'Display descriptors', 'Blast state', 'Blast Type', 'From date (inclusive)', and 'To date (inclusive)'. The main content area shows a table with columns: Name, State, Fired On, Blast Type, and Details. The table is currently empty, displaying 'No data to display'.

The **Create new blast box** opens.

The screenshot shows the 'Create new blast' form in the BlastIQ system. The form is titled 'Create new blast' and is located under the 'Blasts' tab. It includes the following fields:

- Blast name**: A text input field.
- Orica reference (optional)**: A text input field.
- Customer reference (optional)**: A text input field.
- Description (optional)**: A text area with a scroll bar.
- Blast Type**: A dropdown menu with '(none)' selected.

At the bottom of the form are two buttons: 'Create Blast' and 'Cancel'. To the right of the form is a 'Blast descriptors details' box, which contains the following information:

- Blast descriptors details**
- Blast Type**
- The type of blast categorized as per site procedure.

3. Enter information in the relevant areas.

Blast name is how your blast will be identified across the BlastIQ system. It may be the same as other sites. You cannot have two open blasts with the same name.

Orica reference (optional) can be used for alternative names, if required. This may be used at some sites if a different name is used by the site and Orica.

Customer reference (optional) can be used for alternative names, if required. This may be used at some sites if a different name is used by the site and Orica.

Description (optional) is a free field to write any further description information.

Below *Description* will be listed any descriptors that were defined by the site manager. In this example, **Blast Type** has been defined.

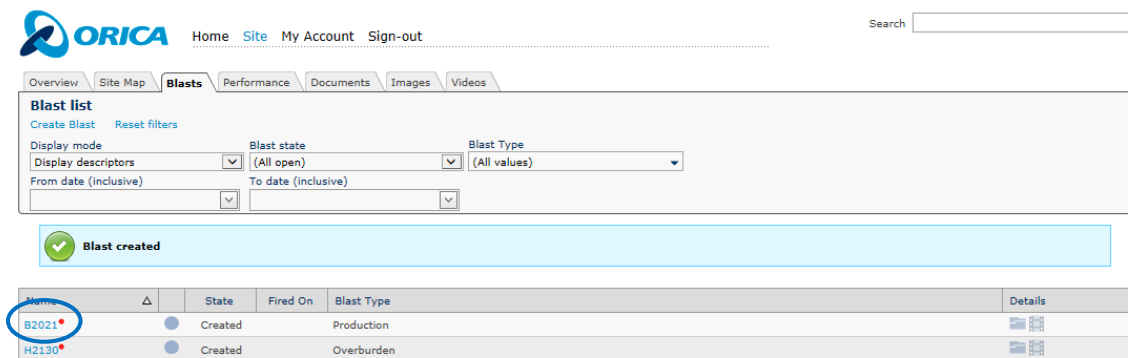
4. Select **Create Blast**.

The screenshot shows the 'Create new blast' form with the following values entered:

- Blast name**: B2021
- Orica reference (optional)**: empty
- Customer reference (optional)**: empty
- Description (optional)**: Mining block 715
- Blast Type**: Production

The 'Create Blast' button is highlighted with a blue circle.

5. The blast (B2021) is added to the Blast list and a “Blast created” message is received.
6. Select a blast by clicking on the blast name.



ORICA Home Site My Account Sign-out

Search

Overview Site Map **Blasts** Performance Documents Images Videos

Blast list
Create Blast Reset filters

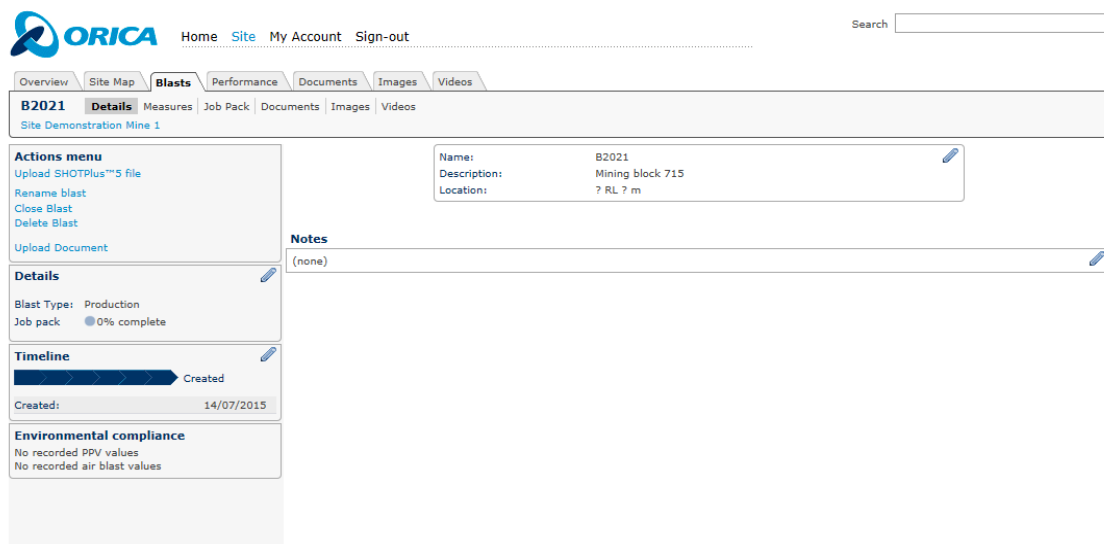
Display mode: Blast state: (All open) Blast Type: (All values)

From date (inclusive): To date (inclusive):

Blast created

Name	State	Fired On	Blast Type	Details
B2021	Created		Production	
H2130	Created		Overburden	

7. The selected blast opens and the current information is displayed.



ORICA Home Site My Account Sign-out

Search

Overview Site Map **Blasts** Performance Documents Images Videos

B2021 Details Measures Job Pack Documents Images Videos

Site Demonstration Mine 1

Actions menu
Upload SHOTPlus™ S file
Rename blast
Close Blast
Delete Blast
Upload Document

Details
Blast Type: Production
Job pack: 0% complete

Timeline
Created: 14/07/2015

Environmental compliance
No recorded PPV values
No recorded air blast values

Name: B2021
Description: Mining block 715
Location: ? RL 7 m

Notes
(none)

6.5 EDITING THE BLAST DETAILS

6.5.1 Details

This feature allows you to edit the site descriptors.

1. Select the **edit** (pencil) icon in the *Details* box.

The screenshot shows the ORICA BlastIQ web interface. At the top, there's a navigation bar with 'Home', 'Site', 'My Account', and 'Sign-out'. A search bar is on the right. Below the navigation bar, there's a tabbed interface with 'Overview', 'Site Map', 'Blasts', 'Performance', 'Documents', 'Images', and 'Videos'. The 'Blasts' tab is selected, showing a list of blasts. The first blast, 'B2021', is selected, and its 'Details' sub-tab is active. On the left side of the 'Details' view, there's an 'Actions menu' with options like 'Upload SHOTPlus™ S file', 'Rename blast', 'Close Blast', 'Delete Blast', and 'Upload Document'. Below this is a 'Details' section with a pencil icon circled in blue. The 'Details' section shows 'Blast Type: Production' and 'Job pack: 0% complete'. Below that is a 'Timeline' section with a progress bar and 'Created: 14/07/2015'. At the bottom is an 'Environmental compliance' section. The main area of the 'Details' view shows fields for 'Name: B2021', 'Description: Mining block 715', and 'Location: ? RL ? m'. There's also a 'Notes' section with a pencil icon.

2. Make the changes.
3. Select **Update**.

The screenshot shows a 'Update Value' dialog box. It has a title bar with 'Update Value' and a close button. Inside, there's a section for 'Blast Type' with a dropdown menu currently set to 'Production'. Below the dropdown, there are two buttons: 'Update' and 'Cancel'. The 'Update' button is circled in blue.

6.5.2 Name

This feature allows you to edit the name information for the blast.

1. Select the **edit** (pencil) icon in the *Name* box.

The screenshot shows the ORICA BlastIQ web application. The top navigation bar includes the ORICA logo, links for Home, Site, My Account, and Sign-out, and a search bar. Below this is a tabbed interface with tabs for Overview, Site Map, Blasts, Performance, Documents, Images, and Videos. The 'Blasts' tab is active, showing a list of blasts. The selected blast is B2021, 'Site Demonstration Mine 1'. The 'Details' sub-tab is active, displaying a sidebar with an 'Actions menu' (Upload SHOTPlus™ S file, Rename blast, Close Blast, Delete Blast, Upload Document), 'Details' (Blast Type: Production, Job pack: 0% complete), 'Timeline' (Created: 14/07/2015), and 'Environmental compliance' (No recorded PPV values, No recorded air blast values). The main content area shows the blast details: Name: B2021, Description: Mining block 715, Location: ? RL ? m. A blue circle highlights the pencil icon next to the 'Name' field. Below the details is a 'Notes' section with '(none)' and a pencil icon.

4. Make the changes.
5. Select **Update**.

The screenshot shows the 'Update Value' dialog box. It has a title bar with a close button (X). The dialog contains four input fields: 'Name' (containing 'B2021'), 'Orica reference' (empty), 'Customer Reference' (empty), and 'Description' (containing 'Mining block 715'). At the bottom, there are two buttons: 'Update' (highlighted with a blue circle) and 'Cancel'.

6.5.3 Notes

This feature allows you to add additional notes.

1. Select the **edit** (pencil) icon in the *Name* box.

The screenshot shows the ORICA BlastIQ web application. The top navigation bar includes the ORICA logo, links for Home, Site, My Account, and Sign-out, and a search bar. The main interface has a sidebar with tabs: Overview, Site Map, Blasts (selected), Performance, Documents, Images, and Videos. Under the 'Blasts' tab, there's a sub-tab for 'B2021' and a link to 'Site Demonstration Mine 1'. The 'Actions menu' on the left includes options like 'Upload SHOTPlus™ S file', 'Rename blast', 'Close Blast', 'Delete Blast', and 'Upload Document'. The 'Details' section shows 'Blast Type: Production' and 'Job pack: 0% complete'. The 'Timeline' section shows a 'Created' status with a date of '14/07/2015'. The 'Environmental compliance' section shows 'No recorded PPV values' and 'No recorded air blast values'. On the right, a box displays 'Name: B2021', 'Description: Mining block 715', and 'Location: ? RL ? m'. A blue circle highlights the pencil icon in the 'Name' box. Below this, a 'Notes' section shows '(none)' with a pencil icon.

2. Add the additional notes.
3. Select **Update**.

The screenshot shows a 'Update Value' dialog box. It has a title bar with a close button. Inside, the 'Notes' section has a text area containing the text 'Access from northern haul road, risk assess traffic.' Below the text area are two buttons: 'Update' and 'Cancel'.

New and/or updated information is displayed and the **Blast updated** message is received.

The screenshot shows the ORICA BlastIQ web application. At the top, there is a navigation bar with the ORICA logo, links for Home, Site, My Account, and Sign-out, and a search bar. Below the navigation bar, there are tabs for Overview, Site Map, Blasts, Performance, Documents, Images, and Videos. The 'Blasts' tab is selected, showing a list of blasts. The first blast, 'B2021', is selected, and its details are displayed. The details include a 'Details' section with 'Blast Type: Production' and 'Job pack: 0% complete', a 'Timeline' section with a 'Created' status and date '14/07/2015', and an 'Environmental compliance' section with 'No recorded PPV values' and 'No recorded air blast values'. A blue banner at the top of the details section indicates 'Blast updated' with a green checkmark icon. Below the banner, there is a 'Notes' section with the text 'Access from northern haul road, risk assess traffic.'

6.6 UPLOAD SHOTPLUS 5 FILE

The SHOTPlus 5 file can be uploaded using the **Upload SHOTPlus 5 file** hyperlink, or by using the process described in Section 9.3.

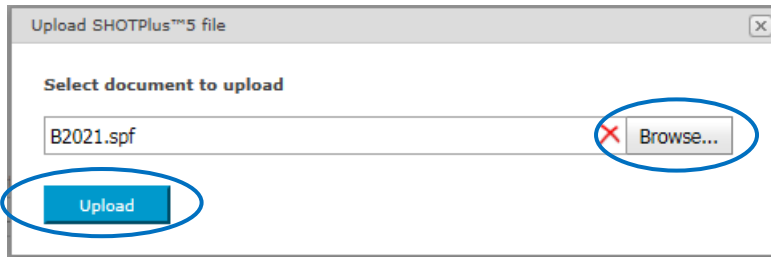
NOTICE

SHOTPlus 5 files cannot be uploaded to a blast that has been created by the LOADPlus system.

1. Select **Upload SHOTPlus 5 file**.

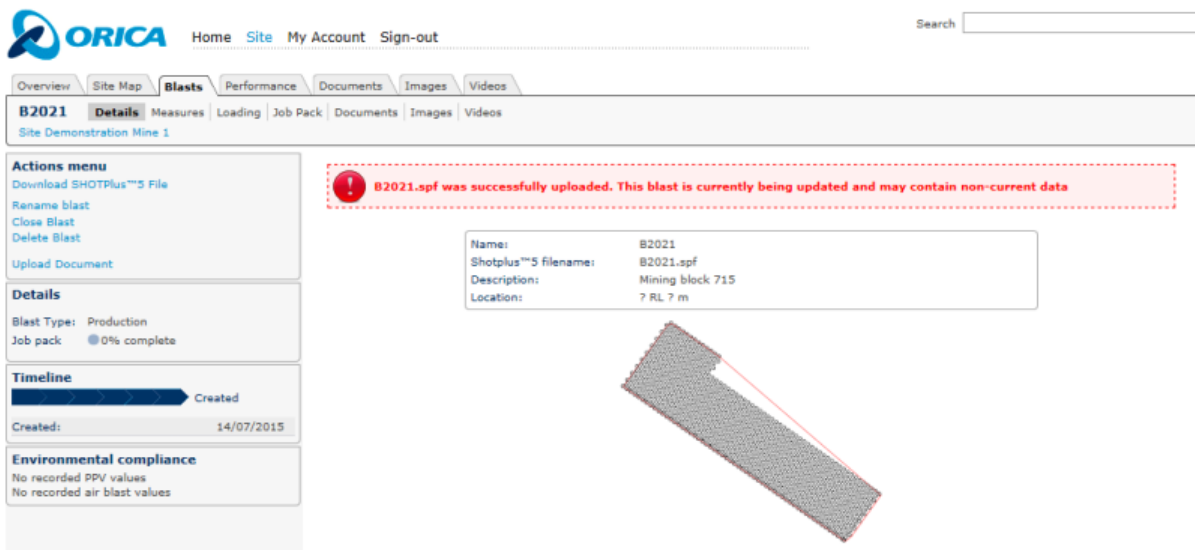
This screenshot is similar to the previous one, showing the ORICA BlastIQ web application. The 'Blasts' tab is selected, and the details for blast 'B2021' are displayed. In this view, the 'Actions menu' is highlighted with a red circle. The 'Actions menu' contains the following options: 'Upload SHOTPlus 5 file', 'Rename blast', 'Close Blast', 'Delete Blast', and 'Upload Document'. The 'Upload SHOTPlus 5 file' option is the first item in the menu. The rest of the interface, including the 'Details' section, 'Timeline', 'Environmental compliance', and 'Notes' section, remains the same as in the previous screenshot.

2. **Browse** for the file to be uploaded
3. Select **Upload**.



While the system is processing, the edit options are locked (shown below by the absence of the edit pencils).

This processing may take several minutes depending upon the size of the file.



Periodically refresh the webpage until the blast is updated with the new information.

Additional tabs will appear. Depending on the site settings, they may include:

- Blast plan
- Hole table
- Inventory
- Timing

Two additional tables have appeared (accessed by scrolling down):

- Blast properties
- Hole types

Blast properties	
Volume (designed):	(none)
Volume Method (designed):	Manual
Powder Factor (designed):	0.54 kg/m³
Energy Factor (designed):	1.17 MJ/m³
Elevation:	402.3 m
Number of redrills:	12
Re-drill Length:	12.1 m
Number of backfills:	1
Backfill Length:	1.2 m

Hole types									
Name	Burden (m)	Spacing (m)	Sub-drill (m)	Angle	Diameter (mm)	Bench Height (m)	Stemming Tol (m)	PF Tol (kg/m³)	Pattern
251mm 7.0m x 8.0m - Flexigel	6.0	7.0	1.0	0.0	251.0	20.0	2.0-6.0	0.3-0.8	Staggered
251mm 7.0m x 8.0m	7.0	8.0	1.0	0.0	251.0	20.0	2.0-6.0	0.3-0.8	Staggered

6.7 EDIT BLAST PROPERTIES

Blast properties are extracted from the SHOTPlus file, however in certain circumstances, the user may wish to calculate the values separately and manually update them.

1. Select the **Blast properties edit** (pencil) icon.

Notes

Access from northern haul road, risk assess traffic.

Blast properties

Volume (designed):	(none)		
Volume Method (designed):	Manual		
Powder Factor (designed):	0.54 kg/m ³		
Energy Factor (designed):	1.17 MJ/m ³		
Elevation:	402.3 m		
Number of redrills:	12	Re-drill Length:	12.1 m
Number of backfills:	1	Backfill Length:	1.2 m

Hole types

Name	Burden (m)	Spacing (m)	Sub-drill (m)	Angle	Diameter (mm)	Bench Height (m)	Stemming Tol (m)	PF Tol (kg/m ³)	Pattern
251mm 7.0m x 8.0m - Flexigel	6.0	7.0	1.0	0.0	251.0	20.0	2.0-6.0	0.3-0.8	Staggered
251mm 7.0m x 8.0m	7.0	8.0	1.0	0.0	251.0	20.0	2.0-6.0	0.3-0.8	Staggered

2. Enter any new values.
3. Select **Update**.

Update Value

Elevation
400

Blast actual volume (m³)
300000

Actual powder factor (kg/m³)
0.5

Actual energy factor (MJ/m³)

Number holes redrilled
12

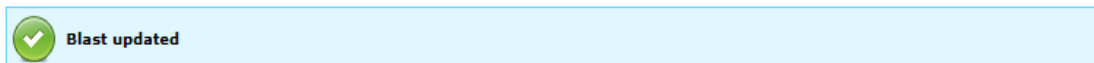
Total redrill (m)
12.1

Number back filled holes
2


Total backfill (m)
20

Update Cancel

4. **Blast updated** message is received.



5. The updated values are displayed under **Blast properties**.

Blast properties 			
Volume (designed):	(none)	Volume (actual):	300000.0 m ³
Volume Method (designed):	Manual		
Powder Factor (designed):	0.54 kg/m ³	Powder Factor (actual):	0.50 kg/m ³
Energy Factor (designed):	1.17 MJ/m ³		
Elevation:	400.0 m		
Number of redrills:	12	Re-drill Length:	12.1 m
Number of backfills:	2	Backfill Length:	20.0 m

6.8 RECORDING BLAST MEASURES

1. Select the **Measures** field.

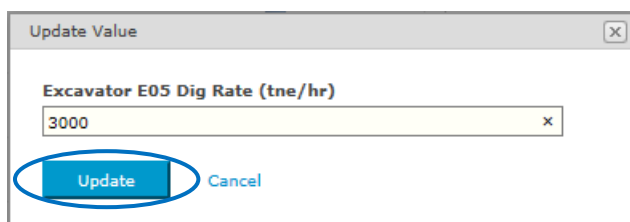
The screenshot shows the ORICA BlastIQ web interface. The top navigation bar includes 'Home', 'Site', 'My Account', and 'Sign-out'. A search bar is on the right. The main menu has tabs for 'Overview', 'Site Map', 'Blasts', 'Performance', 'Documents', 'Images', and 'Videos'. The 'Blasts' tab is active, showing a list of blasts. The 'Measures' sub-tab is selected for blast B2021. The left sidebar contains an 'Actions menu' with options like 'Upload SHOTPlus™5 file', 'Download SHOTPlus™5 File', 'Rename blast', 'Close Blast', 'Delete Blast', and 'Upload Document'. Below this are sections for 'Details' (Blast Type: Production, Job pack: 38% complete), 'Timeline' (Created: 14/07/2015), and 'Environmental compliance' (No recorded PPV values, No recorded air blast values). The main content area shows a 'Blast updated' notification and a table with details for blast B2021: Name: B2021, Shotplus™5 filename: BRAMPTON_2021.spf, Description: Mining block 715, Location: 22.3299S 119.3536E RL 400.0 m. A 3D model of the blast area is visible on the right.

2. Measures has two fields available for editing:
 - Blast measures
 - Environmental measures
3. Select **Blast measures** or **Environmental measures**.

The screenshot shows the ORICA BlastIQ web interface with the 'Measures' sub-tab selected for blast B2021. The left sidebar shows two sub-tabs: 'Blast measures' and 'Environmental measures', both of which are highlighted with red circles. The main content area displays a 'Drilling depth accuracy' bar chart. The chart shows a single bar for the 'First Dip Accuracy (m)' category, with a value of approximately 800. The x-axis represents accuracy ranges from -17.0 to 9.0, and the y-axis represents frequency from 0 to 800. Below the chart are two empty tables labeled 'PPV' and 'Airblast'.

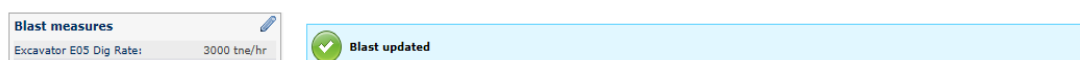
6.8.1 Blast measures

1. Enter values for any measures that have been set up for your site.
2. Select **Update**.



The dialog box titled "Update Value" contains a text input field with the label "Excavator E05 Dig Rate (tne/hr)" and the value "3000". Below the input field are two buttons: "Update" and "Cancel". The "Update" button is highlighted with a blue oval.

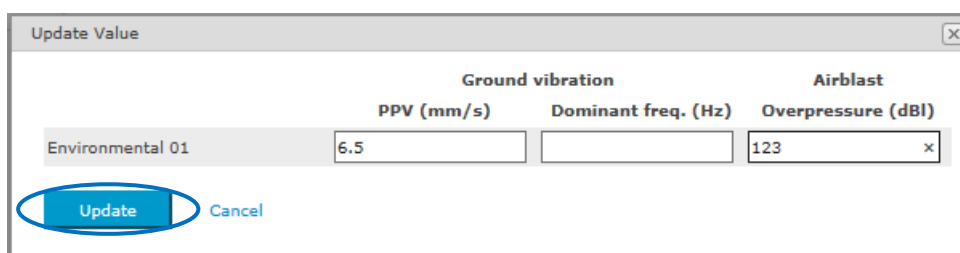
3. **Blast updated** message is received.



The interface shows a "Blast measures" summary card with "Excavator E05 Dig Rate: 3000 tne/hr" and a blue "Blast updated" status bar with a green checkmark icon.

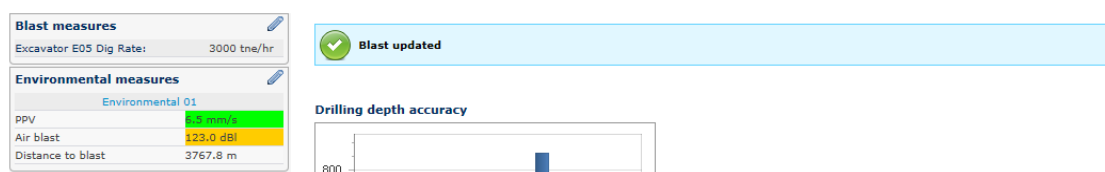
6.8.2 Environmental measures

1. Enter values for environmental measurement.
2. Select **Update**.



The dialog box titled "Update Value" contains a table for environmental measures. The table has two main sections: "Ground vibration" and "Airblast". The "Ground vibration" section has two columns: "PPV (mm/s)" and "Dominant freq. (Hz)". The "Airblast" section has one column: "Overpressure (dBI)". The table has one row labeled "Environmental 01". The "PPV (mm/s)" value is "6.5" and the "Overpressure (dBI)" value is "123". Below the table are two buttons: "Update" and "Cancel". The "Update" button is highlighted with a blue oval.

3. The environmental data values are uploaded to the site.



The interface shows an "Environmental measures" summary card with "Environmental 01" and a table of values: "PPV" (6.5 mm/s), "Air blast" (123.0 dBI), and "Distance to blast" (3767.8 m). The "Air blast" value is highlighted in orange. To the right is a "Drilling depth accuracy" bar chart showing a blue bar at approximately 800. A blue "Blast updated" status bar is also present.

4. Scroll down to view the **Environmental measures** in graphical form.
5. You will notice with **Environmental measures**, the colouring matches the site Point Of Interest (POI) alert and compliance thresholds, which are set by the Site Manager.

6.9 COMPLETING THE JOB PACK

The Job Pack consists of tasks, approvals and documents that are recorded during the blasting process.

1. Select the **Job Pack** field.

The screenshot shows the ORICA BlastIQ web application interface. At the top, there is a navigation bar with the ORICA logo and links for Home, Site, My Account, and Sign-out. Below this is a secondary navigation bar with tabs for Overview, Site Map, Blasts, Performance, Documents, Images, and Videos. The 'Blasts' tab is active, and within it, the 'Job Pack' sub-tab is selected and circled in blue. The main content area displays a list of tasks and documents under the heading 'B2021'. The tasks are organized into sections: Approvals, Designs and Calculations, Survey Data, and SHOTPlus Data. The 'Job Pack' field is highlighted in the navigation bar.

Any Job Pack fields that are linked to SHOTPlus data will automatically have a tick placed in the Process Completed box when a SHOTPlus file that contains that information is uploaded to the blast.

In this example, the following processes have been completed:

- ☒ Blast Plan View – SHOTPlus 5 field Plan View of Blast
- ☒ Loading Data Sheet – SHOTPlus 5 field Load Sheet
- ☒ Dipping Data Sheet – SHOTPlus 5 field Dip Sheet
- ☒ Load Quantities – SHOTPlus 5 field Actual Load Quantities
- ☒ Timing Design – SHOTPlus 5 field Blast Timing Design

This screenshot shows the 'Designs and Calculations' section of the Job Pack. It lists various tasks and documents, each with a checkbox indicating its completion status. The tasks are organized into sections: Designs and Calculations, Survey Data, and SHOTPlus Data. The 'Job Pack' field is highlighted in the navigation bar.

6.9.1 Marking Items as Complete

To mark an item as complete:

1. Select the appropriate empty box (for example: **Approved for Drilling**).

ORICA Home Site My Account Sign-out

Search

Overview Site Map **Blasts** Performance Documents Images Videos

B2021 Details Measures Blast plan Hole table Inventory Timing Loading **Job Pack** Documents Images Videos

Approvals

☒ Approved for Drilling

☐ Approved for Loading

☐ Approved for Firing Upload

Designs and Calculations

☐ Pattern Design Calculation Sheet Upload

Survey Data

☐ Bench Surface Survey Upload

2. A tick is placed in the box and an 'Item has been satisfied' message is received.

ORICA Home Site My Account Sign-out

Search

Overview Site Map **Blasts** Performance Documents Images Videos

B2021 Details Measures Blast plan Hole table Inventory Timing Loading **Job Pack** Documents Images Videos

Item has been satisfied.

Approvals

☒ Approved for Drilling

☐ Approved for Loading

☐ Approved for Firing Upload

Designs and Calculations

☐ Pattern Design Calculation Sheet Upload

Survey Data

☐ Bench Surface Survey Upload

On the right hand side of the page, any items that have descriptions available will display a question mark bubble.

3. Hover the mouse cursor over the question mark bubble.

The description of the field will appear.

ORICA Home Site My Account Sign-out

Search

Overview Site Map **Blasts** Performance Documents Images Videos

B2021 Details Measures Blast plan Hole table Inventory Timing Loading **Job Pack** Documents Images Videos

Item has been satisfied.

Approvals

☒ Approved for Drilling

☐ Approved for Loading

☐ Approved for Firing Upload

Designs and Calculations

☐ Pattern Design Calculation Sheet Upload

Customer drill and blast supervisor must tick this before sending file to drill.

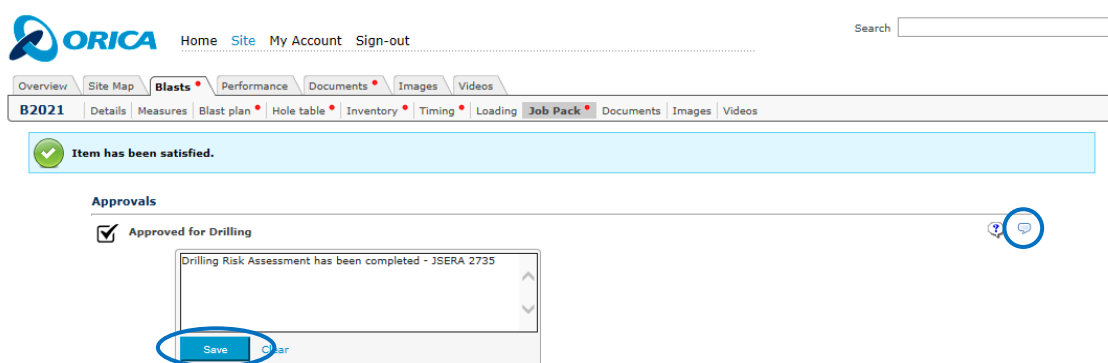
6.9.2 Adding Comments to Job Pack Fields

To add a comment to a Job Pack field:

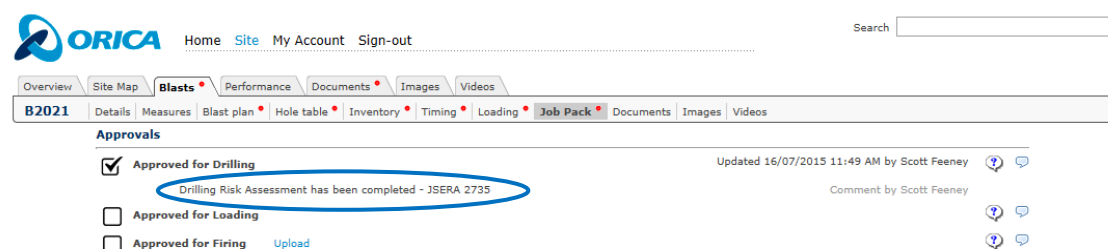
1. Select the blue add comment button on the right of screen.
2. Enter comment.
3. Select Save.

NOTICE

Only one comment can be saved per field.



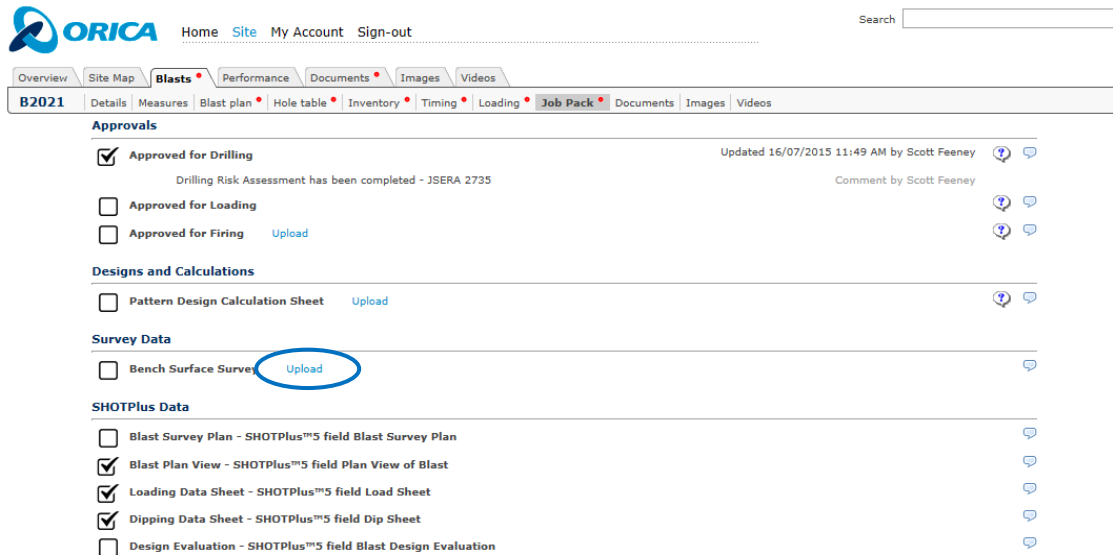
4. Comment appears under the field.



6.9.3 Job Pack File Uploads

Some items are configured to allow file uploads. A blue **Upload** link appears next to these items.

1. Select **Upload**.

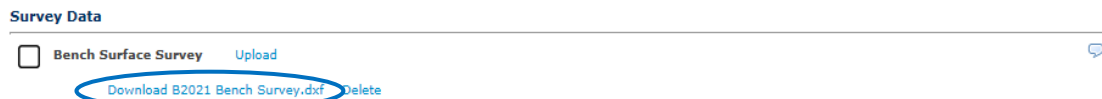


You will be prompted to upload the file.

2. Browse to the file's location.
3. Select **Upload Document**.



The file uploads and appears in the relevant area.

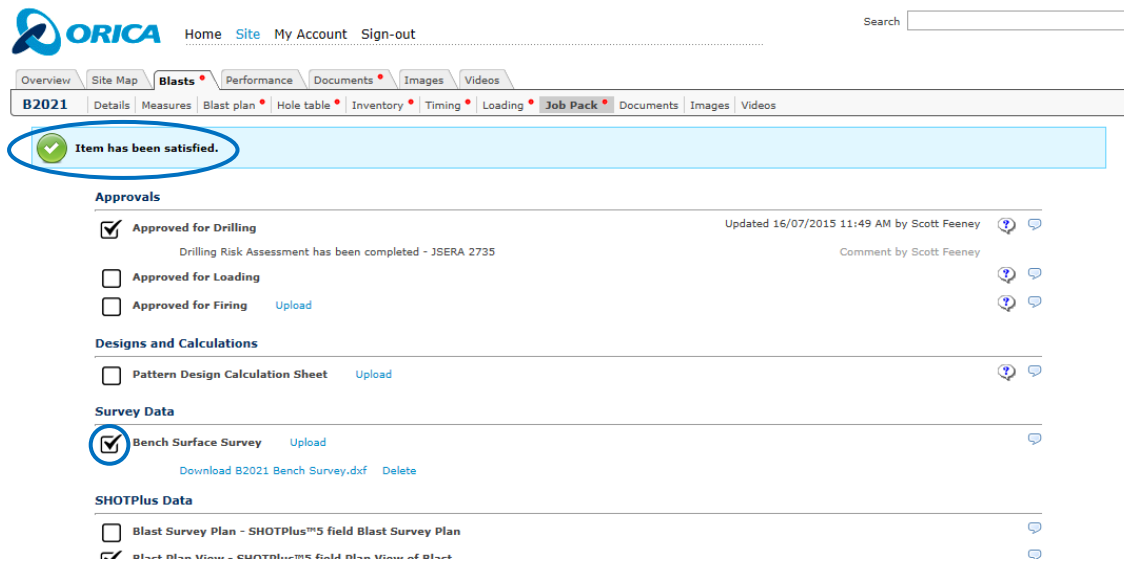


NOTICE

There is no tick in the box.

Uploading a file doesn't automatically update the item as complete. This allows you to manage draft versions.

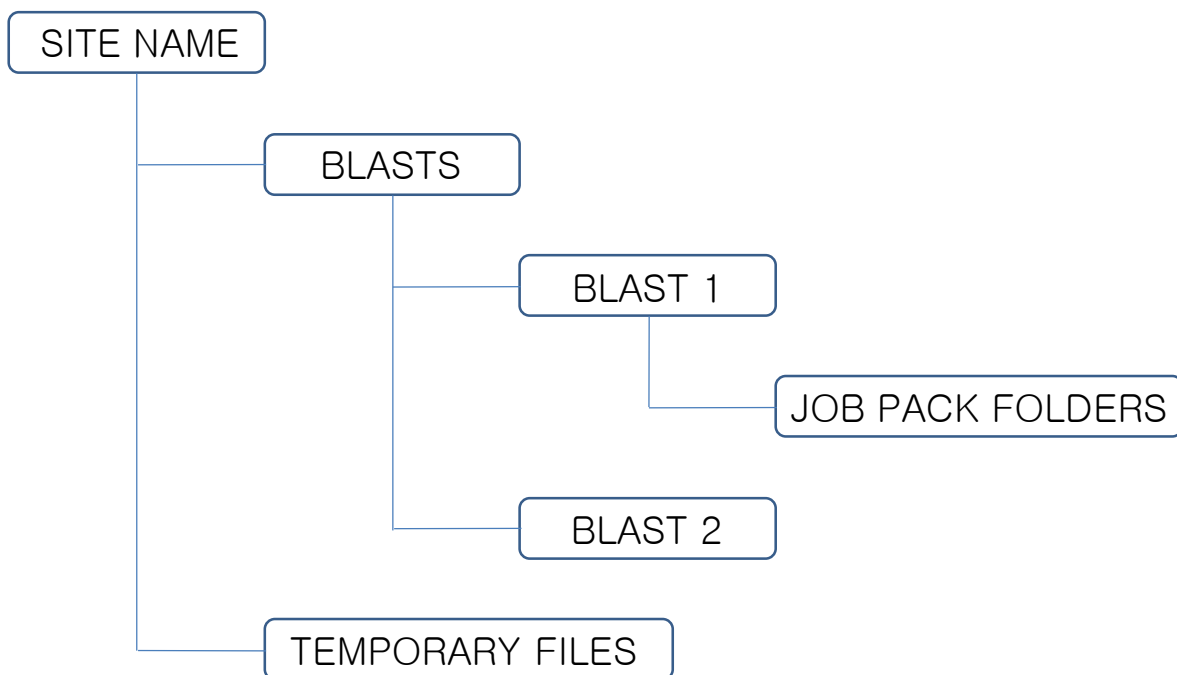
4. Select the empty box (**Bench Surface Survey** in this example).
5. A tick is placed in the box and an 'Item has been satisfied' message is received.



6.10 USING THE DOCUMENTS MANAGER

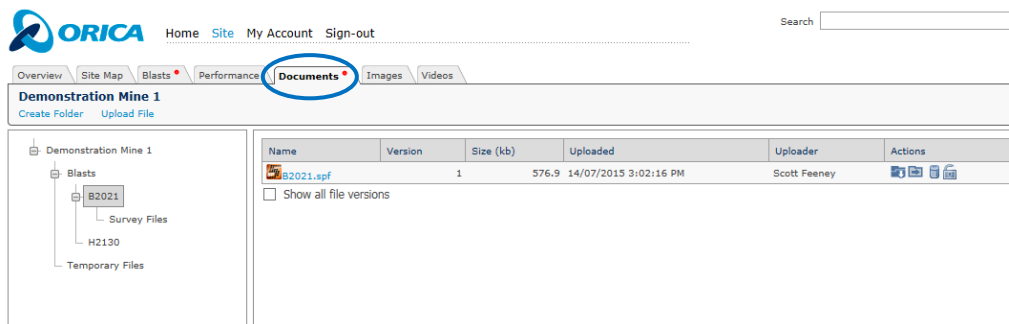
The Documents Manager works much like a file system: it has folders and files within those folders.

The top folder is always the Site Name. Under the Site Name there is always a folder for Blasts. The Blasts folder contains a separate folder for each blast.



To access the Documents Manager:

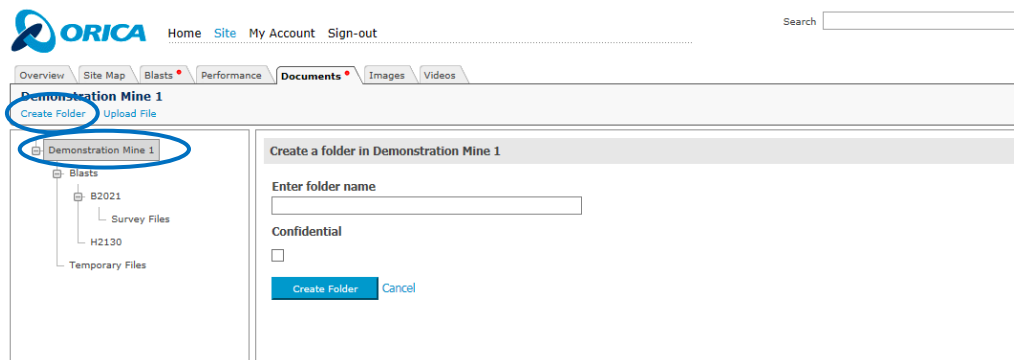
1. Select the **Documents** tab.



6.10.1 New Folder Creation

At the site level you can create folders to store files relating to blasting on site, such as templates, risk assessments, information, etc.

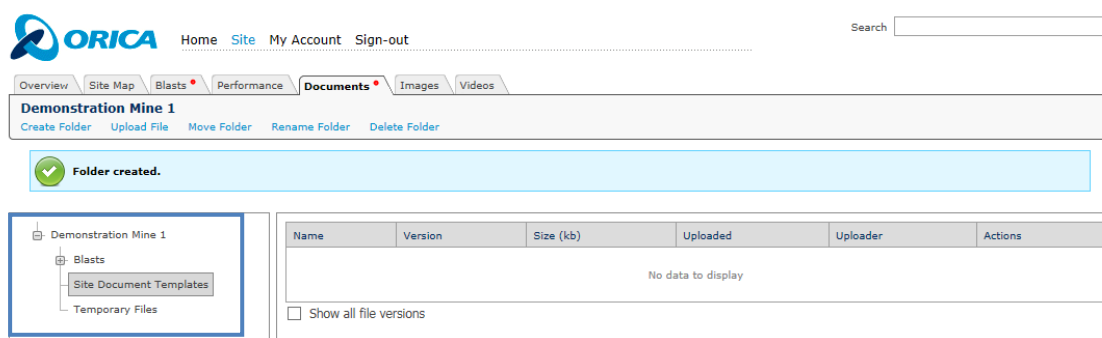
1. Ensure **Site Name** level is selected.
2. Select **Create Folder** (from under Site Name).



3. Enter the new folder name.
4. Select **Create Folder**.



The new folder appears under the Site Name.

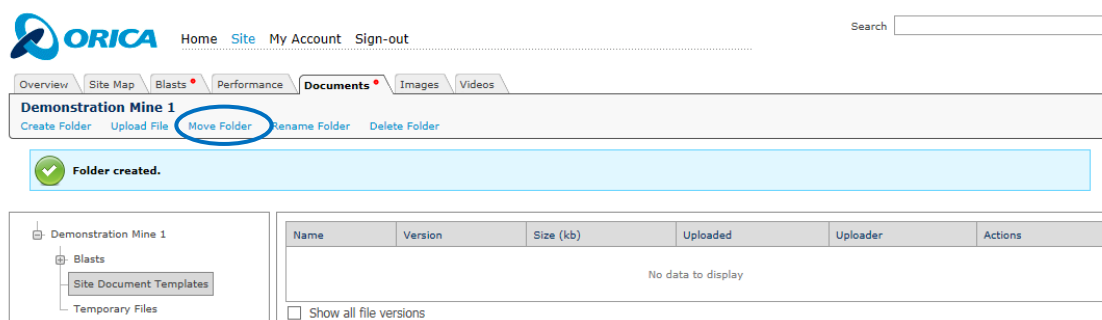


6.10.2 Folder Relocation

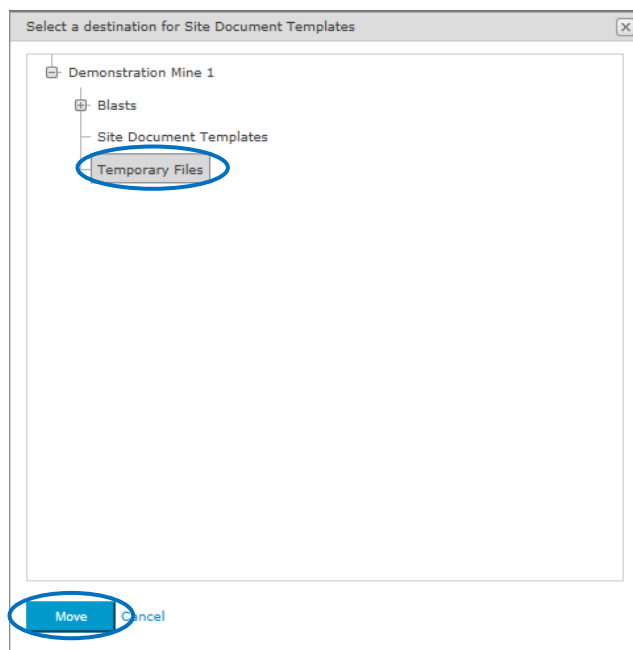
You have the option to move the folder to a different location within the file tree.

To move a folder:

1. Select **Move Folder**.



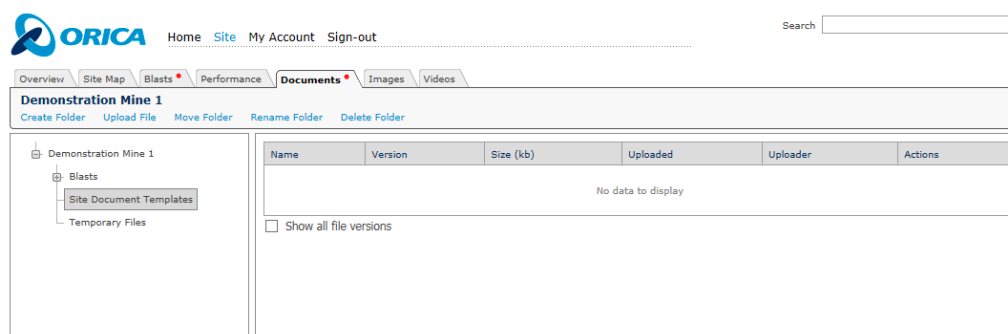
2. Select the new location folder.
3. Select **Move**.



6.10.3 Rename Folder

The Documents Manager gives the ability to rename folders. To rename a folder:

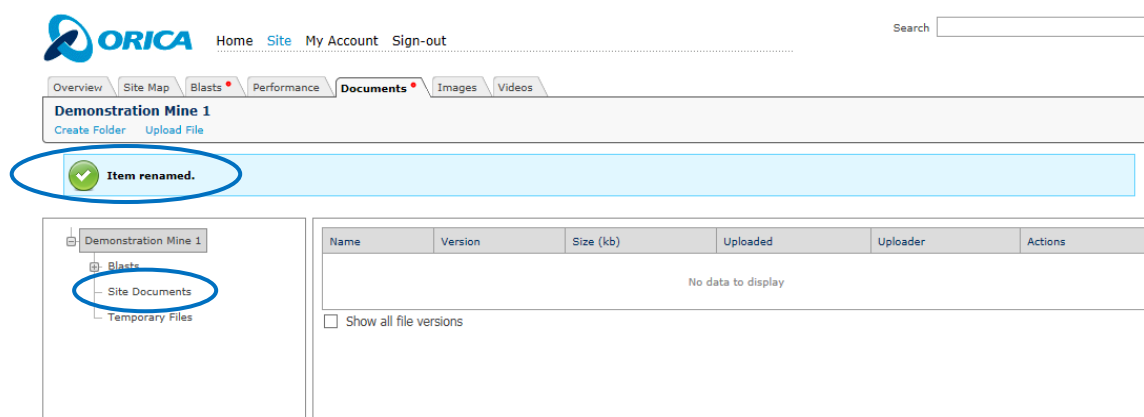
1. Select the folder.
2. Select **Rename Folder**.



3. Enter the new folder name.
4. Select **Rename**.



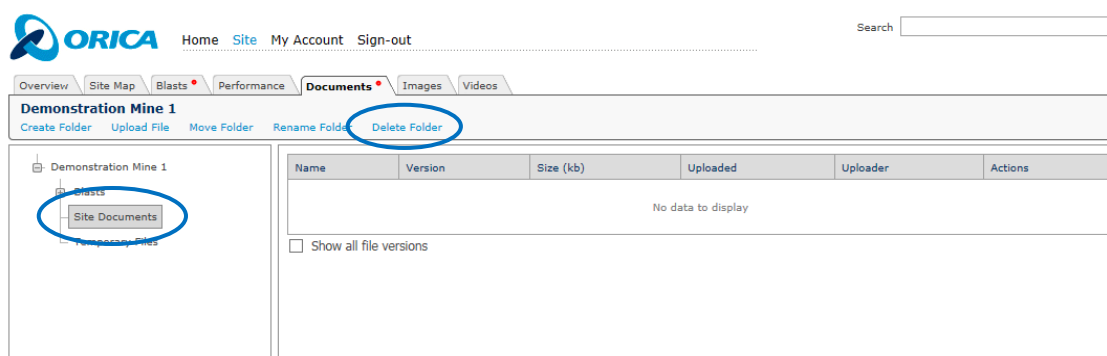
The folder has now been renamed (**Site Documents**) and the 'Item renamed' message has been received.



6.10.4 Folder Deletion

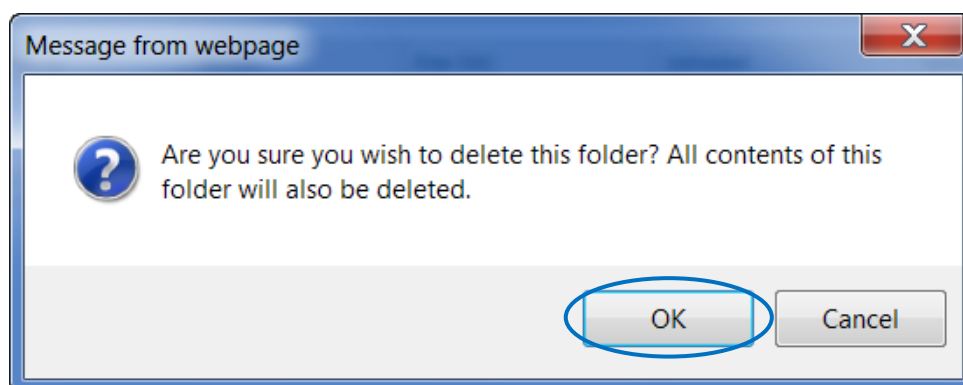
The Documents Manager gives the ability to delete folders. To delete a folder:

1. Select the folder.
2. Select **Delete Folder**.

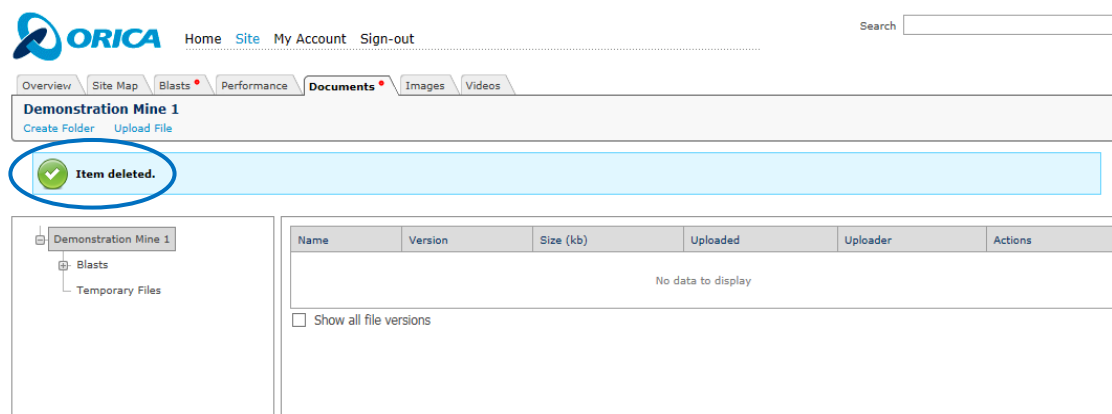


A warning message is received.

3. Select **OK**.



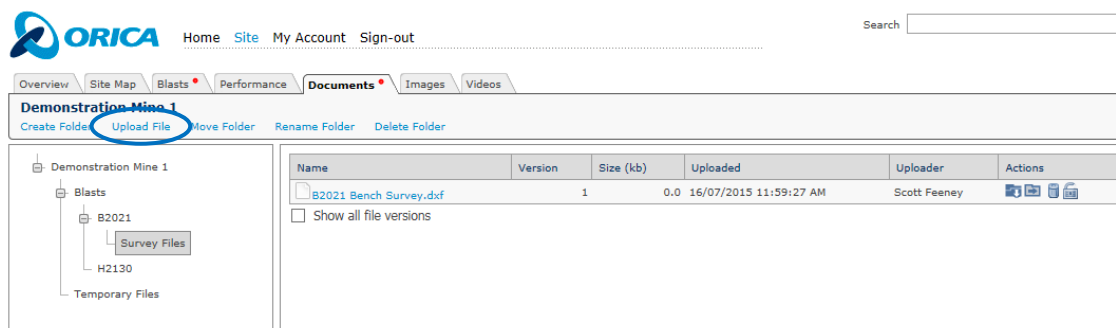
The folder has been removed (**Site Documents**) and the 'Item deleted' message has been received.



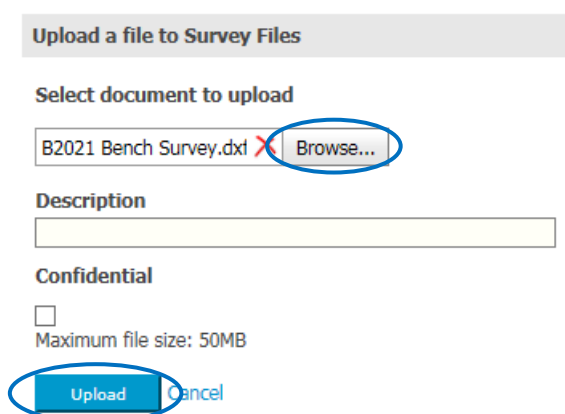
6.10.5 Uploading a File using Documents Manager

To upload a file using the Documents Manager:

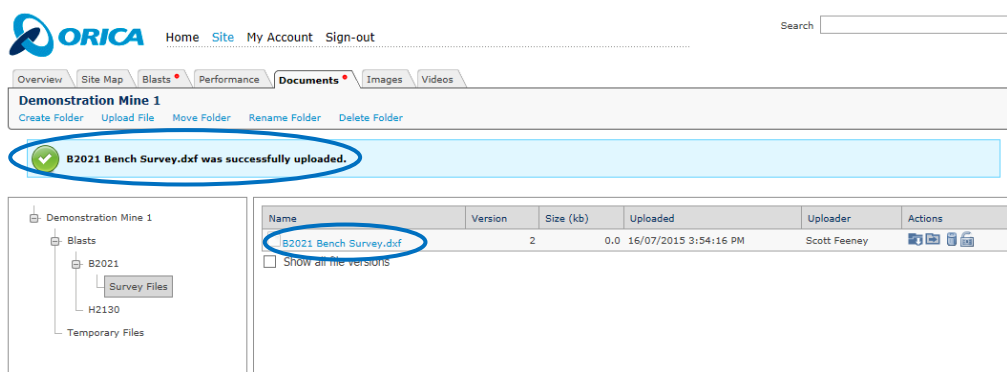
1. Select **Upload File**.








2. Select **Browse** and locate the file to upload.
3. Add file description (optional).
4. Select **Upload**.



The file (**B2021 Bench Survey.dxf**) has been uploaded and the '**...was successfully uploaded.**' message has been received.











When a file is uploaded with the same name as a file already present in the folder, the system will recognise this and save the new file with an automatically incremented version number. All versions of the file are retained by the system.









Name	Version	Size (kb)	Uploaded	Uploader	Actions
 B2021 Bench Survey.dxf	2	0.0	16/07/2015 3:54:16 PM	Scott Feeney	   
<input type="checkbox"/> Show all file versions					

To view all versions of the file/s:

1. Select **Show all file versions** (by placing a tick in the box).

Name	Version	Size (kb)	Uploaded	Uploader	Actions
 B2021 Bench Survey.dxf	2	0.0	16/07/2015 3:54:16 PM	Scott Feeney	   
 B2021 Bench Survey.dxf	1	0.0	16/07/2015 11:59:27 AM	Scott Feeney	 
<input checked="" type="checkbox"/> Show all file versions					

When viewing 'all versions', you can use the circle arrow to revert back to that version of the file.


Name	Version	Size (kb)	Uploaded	Uploader	Actions
 B2021 Bench Survey.dxf	2	0.0	16/07/2015 3:54:16 PM	Scott Feeney	   
 B2021 Bench Survey.dxf	1	0.0	16/07/2015 11:59:27 AM	Scott Feeney	 
<input checked="" type="checkbox"/> Show all file versions					

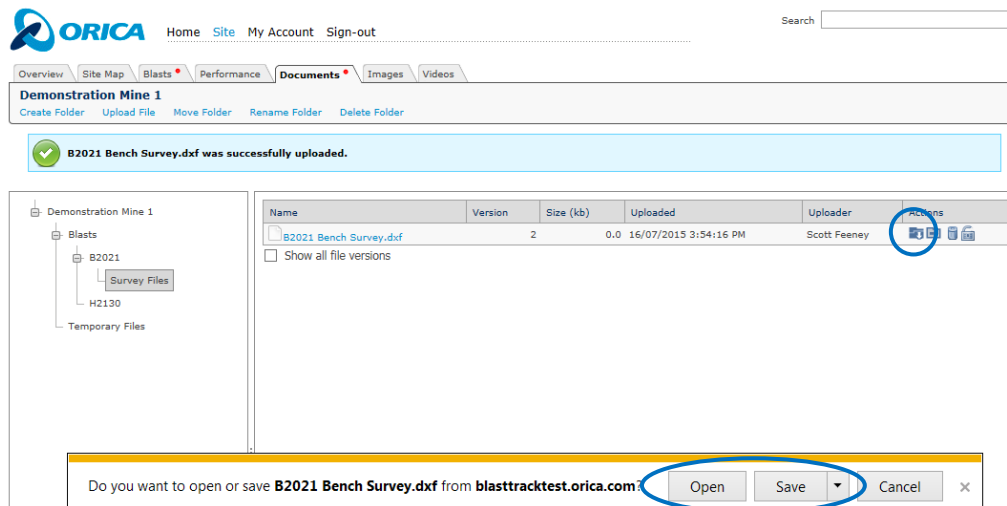
Each document has a number of actions that can performed using the Documents Manager:

- Download a File
- Move a File
- Delete a File
- Make a File Confidential




6.10.6 Download a File using Documents Manager

To download a file using Documents Manager:

1. Select the **Download** icon ().
2. Select **Open** or **Save**.




The screenshot shows the ORICA Documents Manager interface. At the top, there is a navigation bar with links for Home, Site, My Account, and Sign-out. Below this is a search bar. The main content area has tabs for Overview, Site Map, Blasts, Performance, Documents (active), Images, and Videos. Under the Documents tab, there is a section for "Demonstration Mine 1" with options to Create Folder, Upload File, Move Folder, Rename Folder, and Delete Folder. A green checkmark icon indicates that "B2021 Bench Survey.dxf" was successfully uploaded. Below this, a table lists the file details:

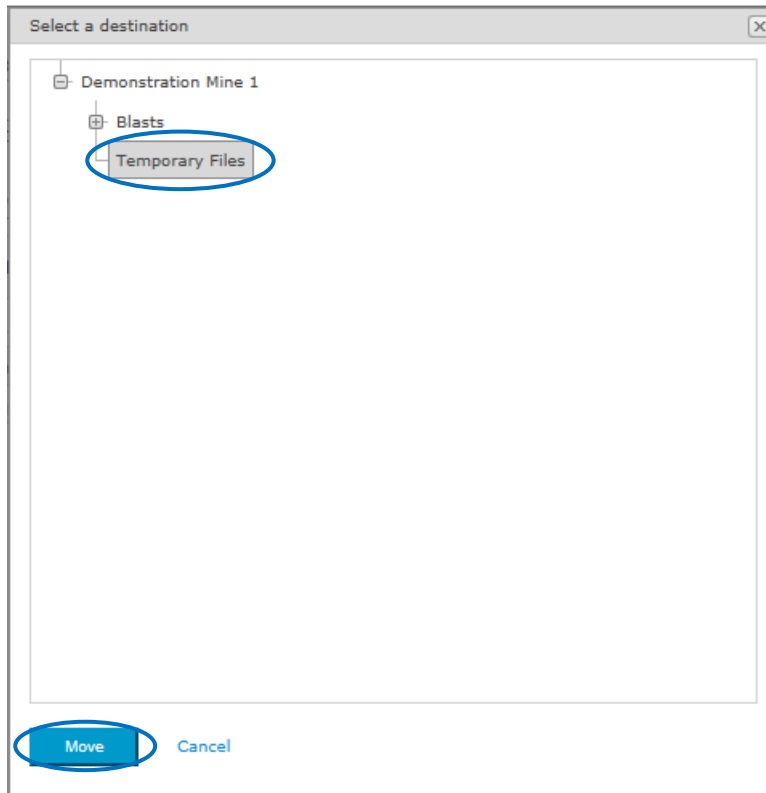
Name	Version	Size (kb)	Uploaded	Uploader	Actions
B2021 Bench Survey.dxf	2	0.0	16/07/2015 3:54:16 PM	Scott Feeney	  

Below the table, there is a checkbox labeled "Show all file versions". At the bottom, a dialog box asks "Do you want to open or save B2021 Bench Survey.dxf from blasttracktest.orica.com?". The dialog has buttons for "Open", "Save", and "Cancel". The "Open" and "Save" buttons are circled in blue.

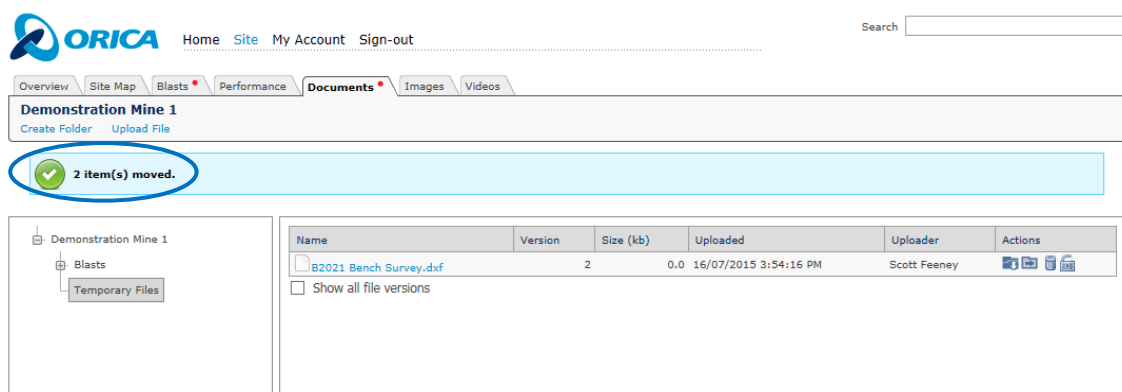
6.10.7 Move a File using Documents Manager

To move a file using Documents Manager:

1. Select the **Move** icon ().
2. Select the new location folder.
3. Select **Move**.



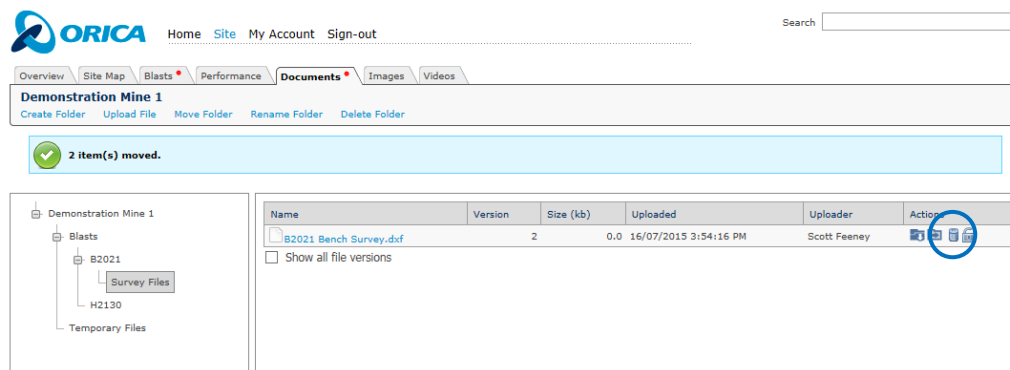
All versions of the file are moved.



6.10.8 Delete a File using Documents Manager

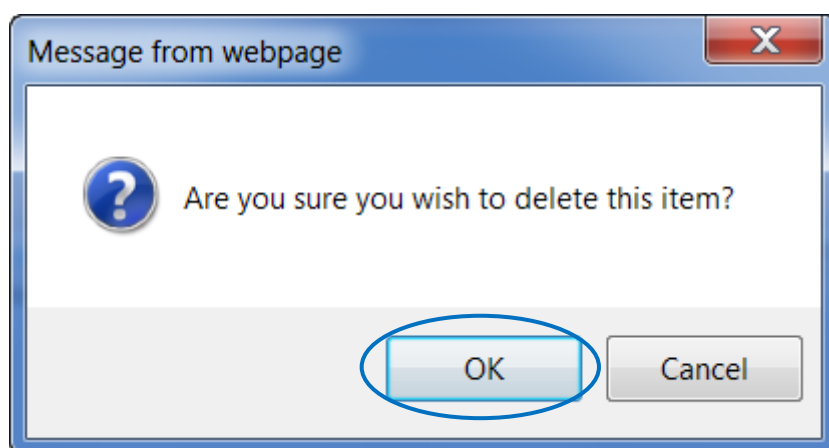
To delete a file using Documents Manager:

1. Select the **Delete** icon ().

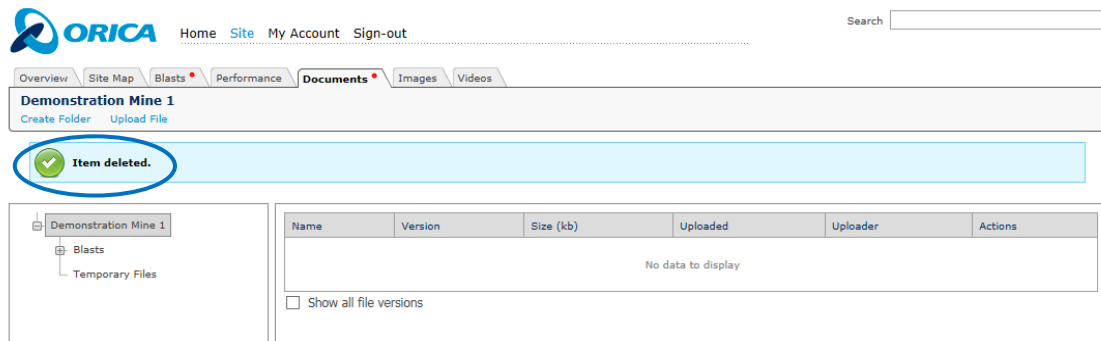


A warning message is shown.

2. Select **OK**.



The file has been deleted (**B2021 Bench Survey.dxf**) and the '**Item deleted**' message has been received.

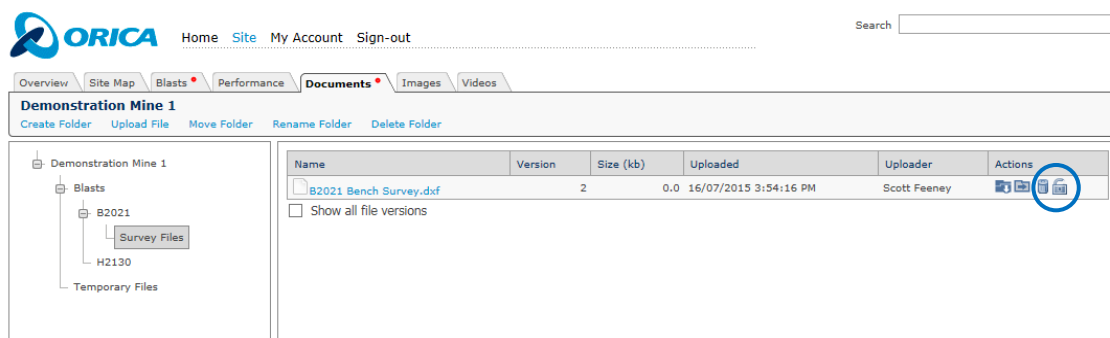
**NOTICE**

If a file has been deleted by mistake, or you believe a file has been deleted in error by other parties, you can contact BlastIQ Support and request the file be undeleted.

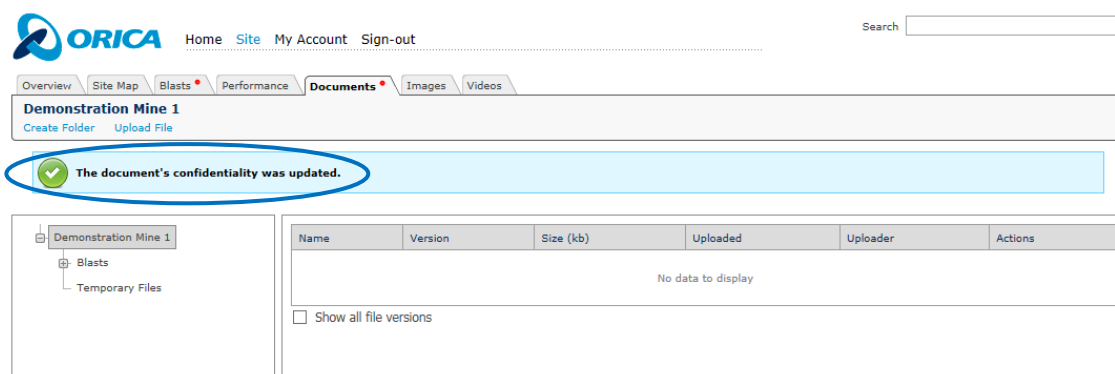
6.10.9 Make a File Confidential using Documents Manager

To make a file confidential a file using Documents Manager:

1. Select the **Make confidential** icon ().



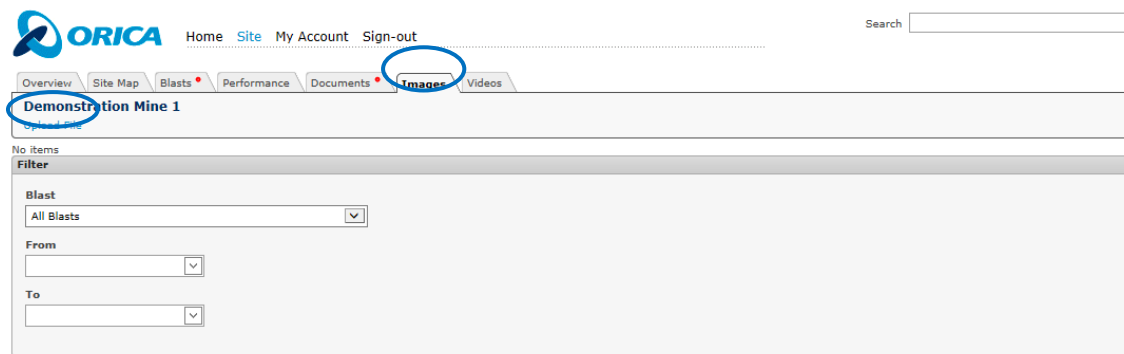
'The document's confidentiality was updated.' message is received.



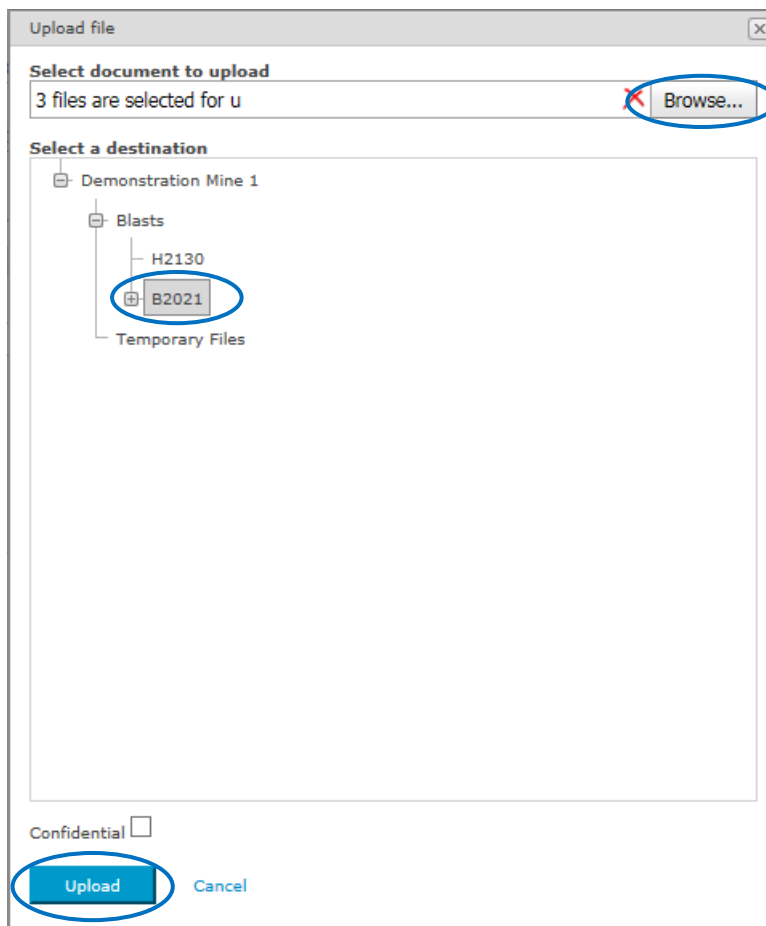
6.11 USING THE IMAGES LIBRARY

Any image file that is uploaded to the **Job Pack** or to the **Documents Manager** will automatically be detected and a thumbnail will appear in the **Images Library**. In addition, the **Images** page has the option to upload an image file.

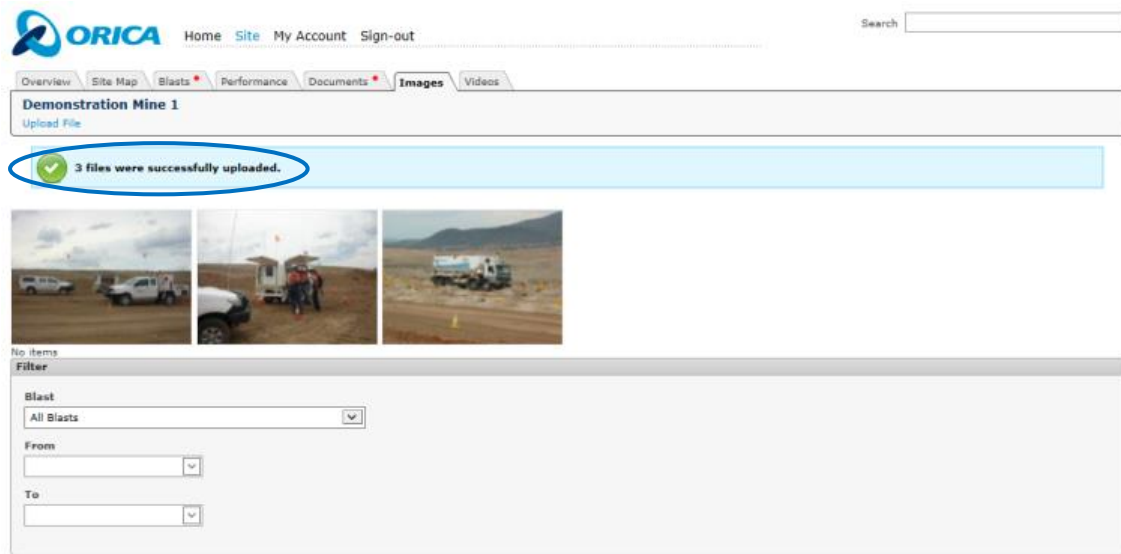
1. Select the **Images** tab.
2. Select **Upload File**.



3. Browse for the image file/s. Multiple images may be selected and uploaded together.
4. Select the destination folder.
5. Select **Upload**.



6. The image files appear and the '**...files were successfully uploaded.**' message is received.



6.12 USING THE VIDEOS LIBRARY

Any compatible video file that is uploaded to the **Job Pack** or to the **Documents Manager** will automatically be detected and a thumbnail will appear in the **Videos** library.

Compatible video file types are:

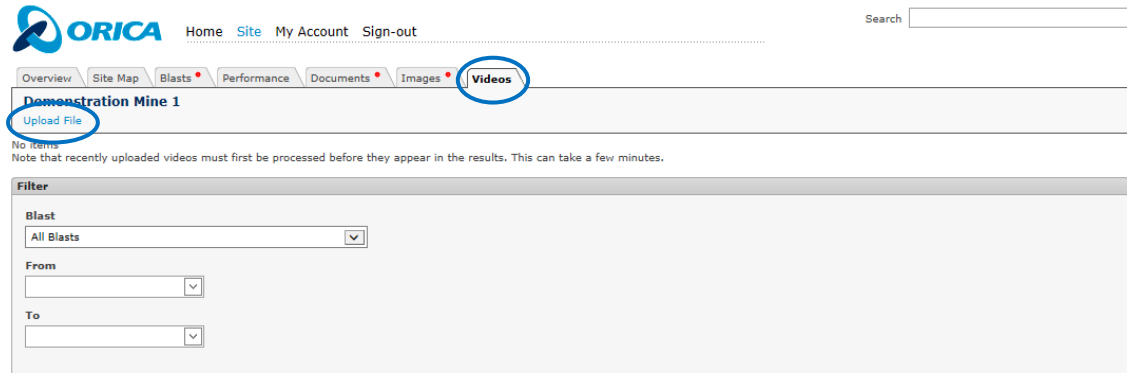
- .avi
- .mp4
- .mpeg
- .mpg
- .wmv

Be aware that some of the above file types may not be compatible, depending upon the codec used. If this happens, the video will still upload and can be downloaded from the system, but will not be able to be played online. This is designated by an exclamation icon appearing instead of a thumbnail representing the file.

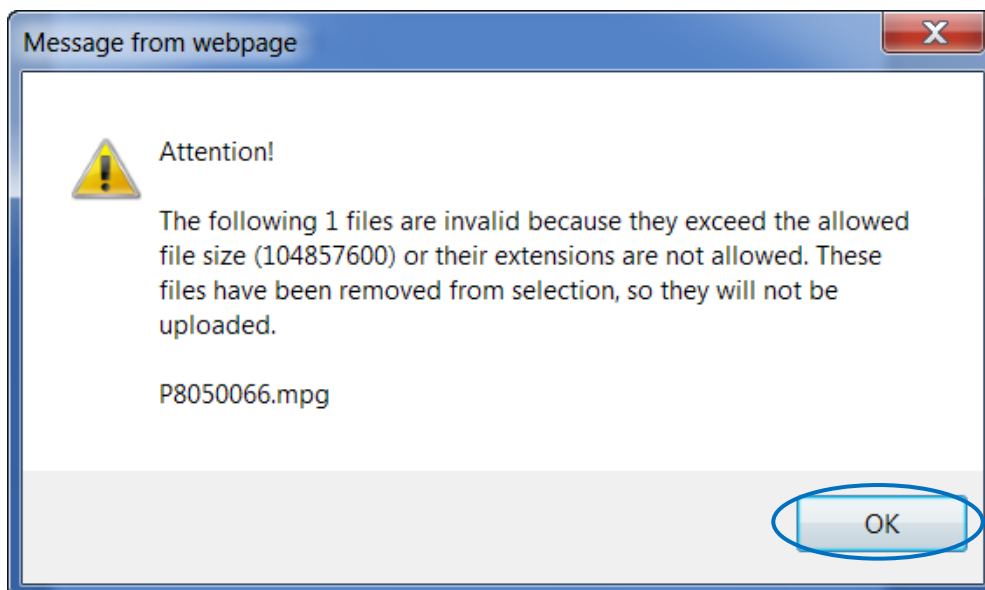


In addition, the **Videos** page has the option to upload a video file.

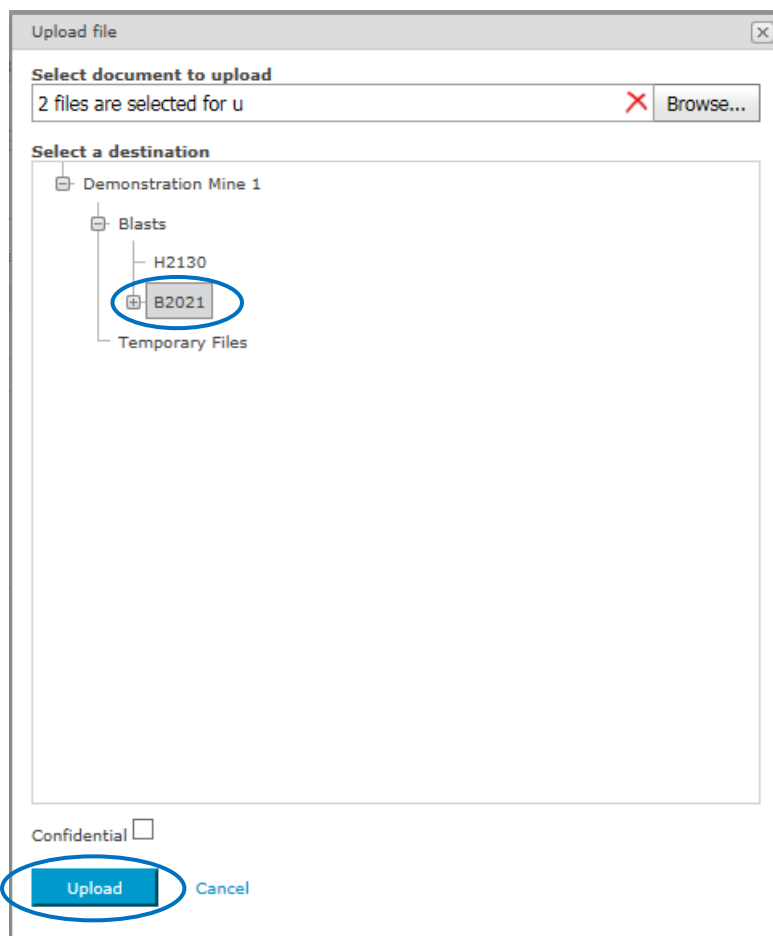
1. Select the **Videos** tab.
2. Select upload file.



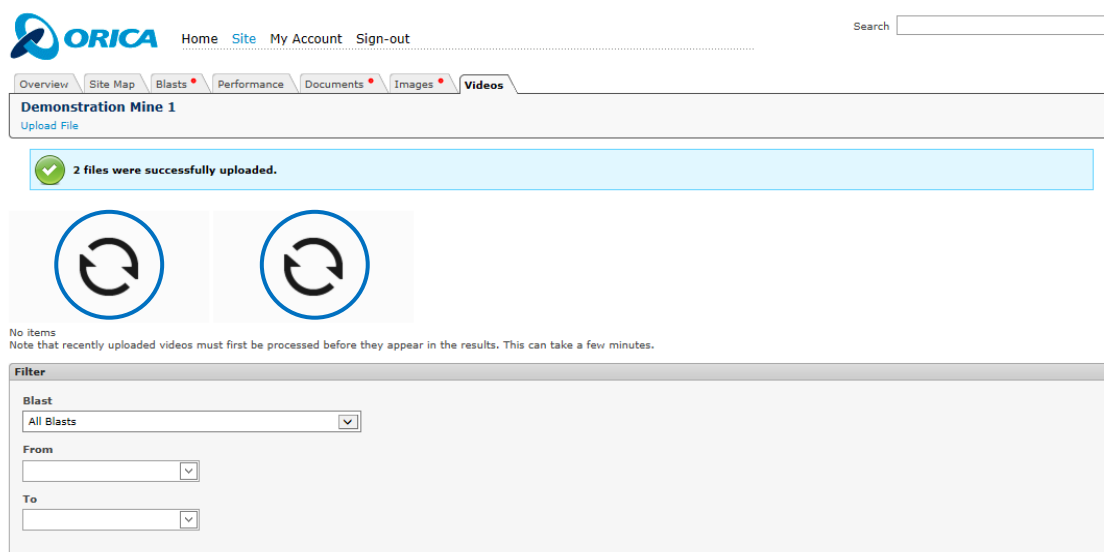
3. Browse for the video file/s. Multiple videos may be selected and uploaded together.
If a video is of a non-compatible format or it exceeds the file size limit for the system, the following error message will be displayed:
Select **OK** to continue.



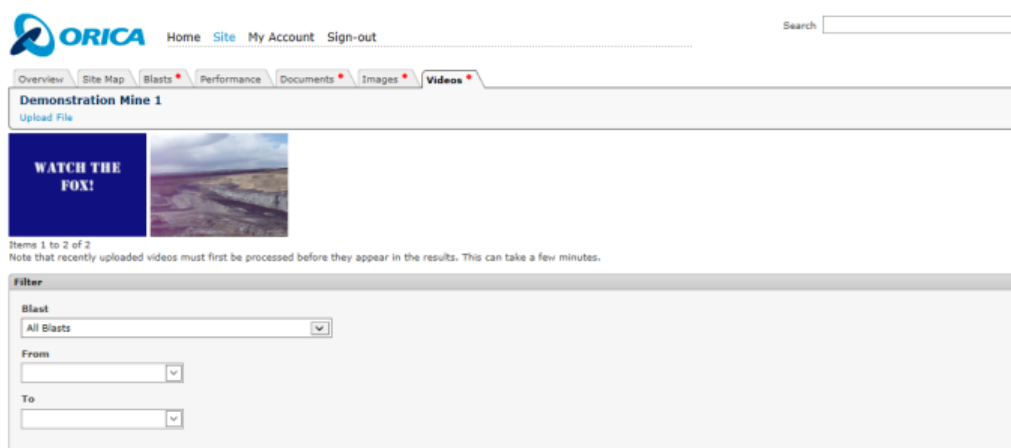
4. Select the destination folder.
5. Select **Upload**.



The video files appear as thumbnails; however processing the videos takes a number of minutes, during this time the processing icon/s will appear. At this time, videos are available for download, but are unable to be played online.



- After several minutes, **refresh** the webpage and the thumbnail/s will appear.

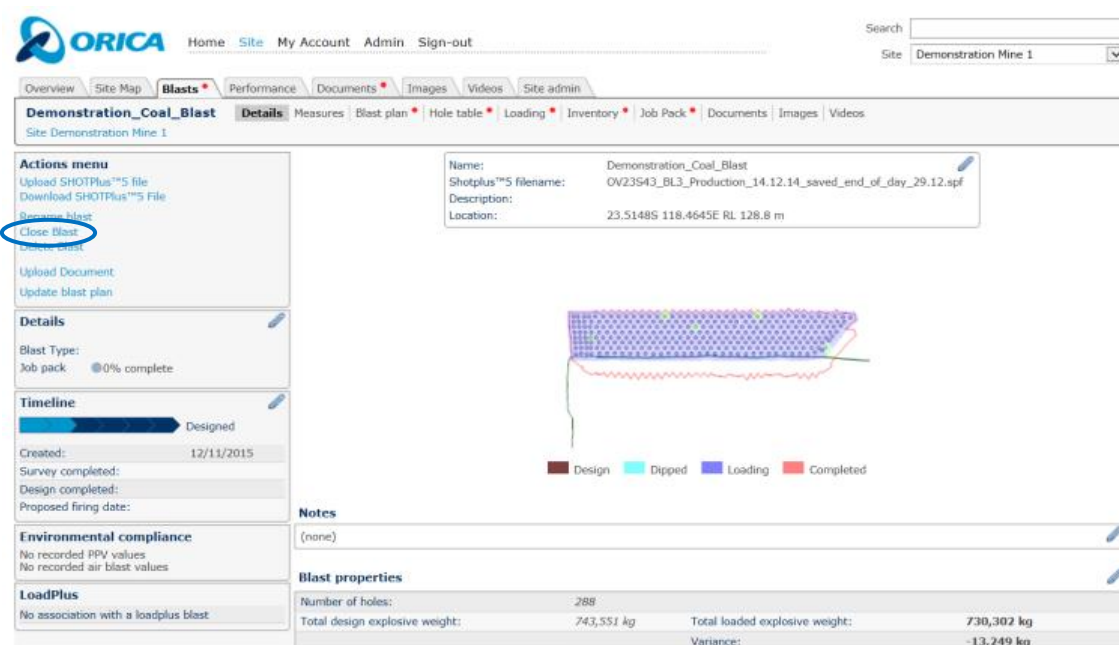


6.13 MARKING BLASTS AS CLOSED

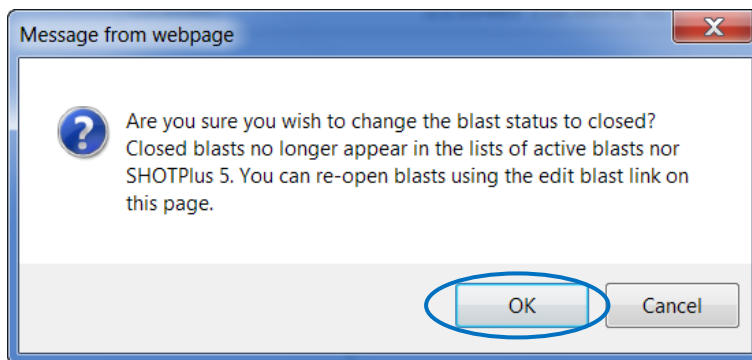
By default the blasts list in BlastIQ and SHOTPlus 5 displays all open blasts. To reduce clutter, it is advised to mark a blast as closed after all documentation is completed.

From the blast **Details** page:

- Select **Close Blast** in the actions menu.

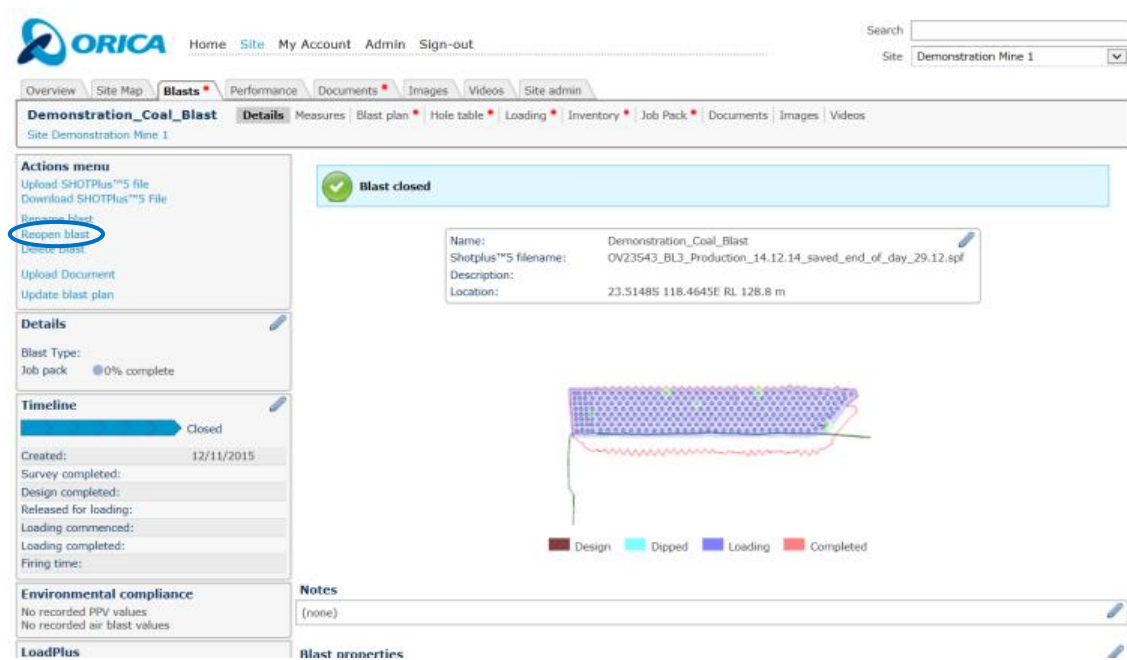


2. Select **OK**.



6.13.1 To Reopen a Blast once it has been Closed

1. Select **Reopen blast**.



7 USING BLASTIQ AS A SITE MANAGER

Section Revision: 0

Revision Date: August 2015

7.1 OVERVIEW

Site Managers may view and edit the project definition and view and edit information in all project sites subject to the confidentiality provisions.

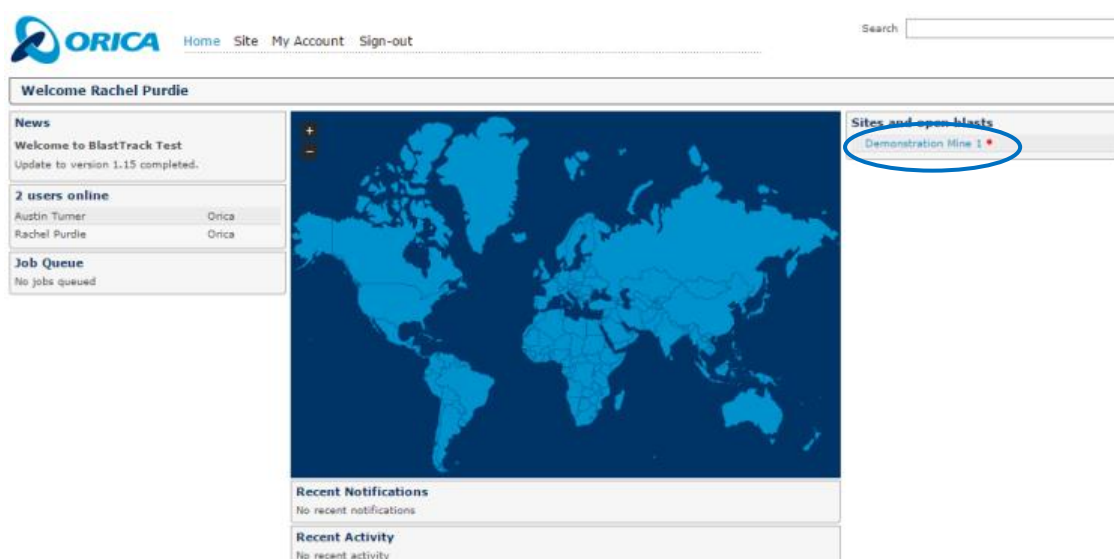
Site Managers are able to perform all tasks from:

- Section 4 USING BLASTIQ AS A VIEWER
- Section 5 USING BLASTIQ AS A CONTRIBUTOR
- Section 6 USING BLASTIQ AS AN EDITOR

Site Managers can set up and configure their site on BlastIQ with capabilities including:

- Adding site members
- Selecting the features available
- Creation of blast descriptors and blast measures
- Setting up a Job Pack template
- Configuring the site map

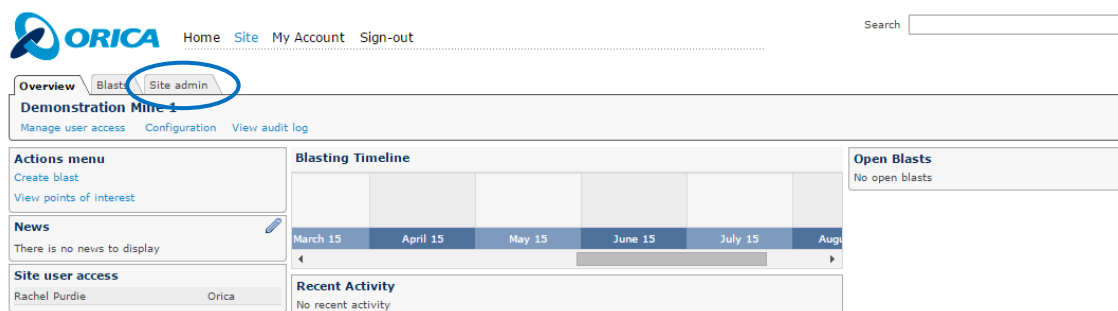
To begin setting up the site page, select the relevant site from the **Sites and open blasts** list.



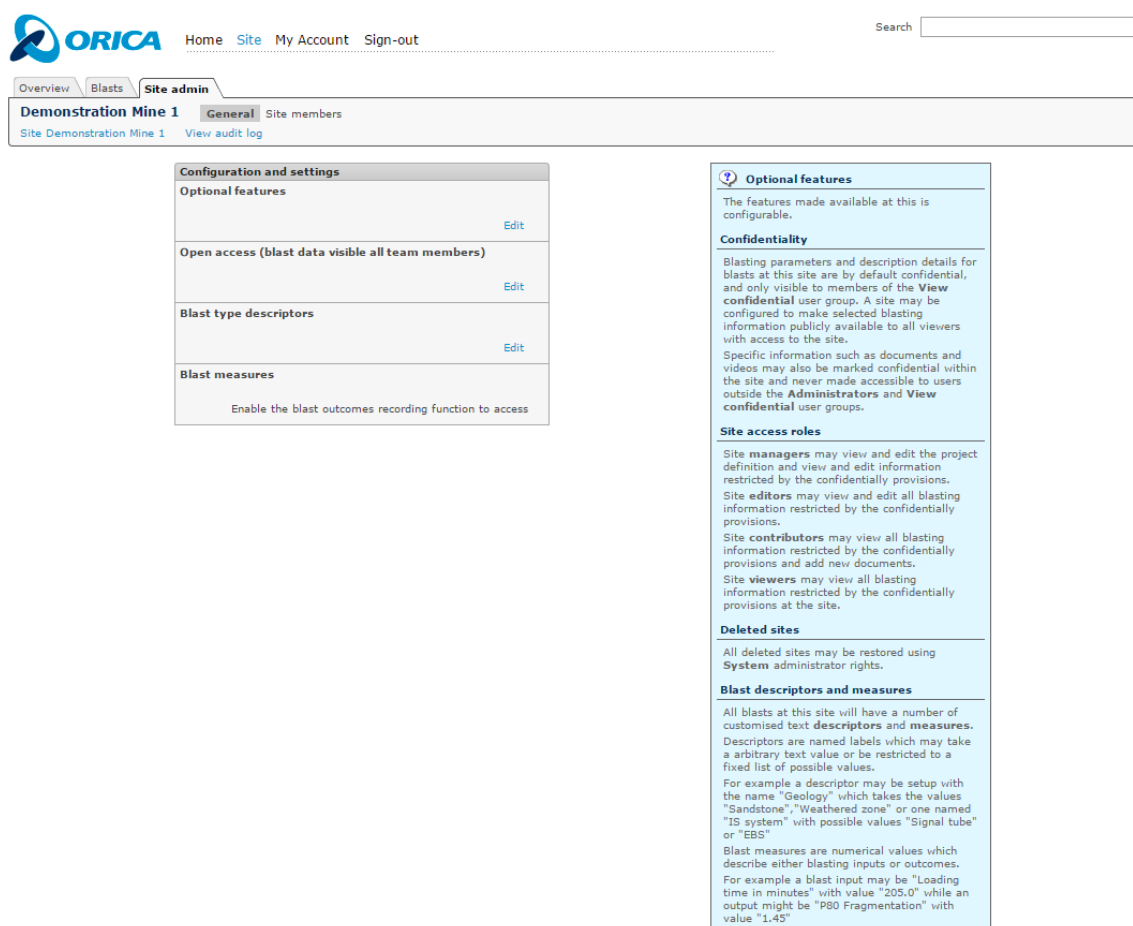
7.2 GENERAL SITE CONFIGURATION

The following describes how to add site members and setup optional features, access settings, blast descriptors and blast measures.

1. From the site overview page, click on the **Site Admin** tab.



All site configuration is performed on the **Site Admin** page.



Information relating to site configuration is given in the blue box and summarised below:

Confidentiality –

- Confidential items are only visible to members of the **View confidential** user group.
- Specific information may be configured to be publicly available to all site users.
- Specific information may be marked confidential within the site to restrict access to users outside the **Administrators** and **View confidential** user groups.

Site access roles –

- Site **managers**: view and edit project definition, and information restricted by the confidentiality provisions.
- Site **editors**: view and edit all blasting information restricted by the confidentiality provisions.
- Site **contributors**: view and edit all blasting information restricted by the confidentiality provisions and add new documents
- Site **viewers**: view all blasting information restricted by the confidentiality provisions at the site.

Deleted sites –

- All deleted sites may be restored using **System** administrator rights.

Blast Descriptors –

- Descriptors are named labels containing a text value
- For example a descriptor may be named “Geology” which takes the values “Sandstone”, “Weathered zone”

Blast Measures –

- Measures are numerical values which describe blasting inputs or outcomes
- For example a blast input may be “Loading time in minutes” with value “205.0”, or an output of “P80 Fragmentation” with a value of “1.45”

7.2.1 Adding Site Members

Configure the users that have access to the site and their level of access.

1. Click on **Site members** from the site overview page.

The screenshot shows the ORICA BlastIQ web interface. At the top, there is a navigation bar with links for Home, Site, My Account, and Sign-out. A search bar is located on the right. Below the navigation bar, there are tabs for Overview, Blasts, and Site admin. The Site admin tab is active, and within it, the 'Site members' sub-tab is selected and highlighted with a blue circle. The main content area is divided into two columns. The left column, titled 'Configuration and settings', contains four sections: 'Optional features' with an 'Edit' link, 'Open access (blast data visible all team members)' with an 'Edit' link, 'Blast type descriptors' with an 'Edit' link, and 'Blast measures' with a checkbox to 'Enable the blast outcomes recording function to access'. The right column, titled 'Optional features', contains a blue box with the following text: 'The features made available at this is configurable.' followed by a section header 'Confidentiality' and a paragraph: 'Blasting parameters and description details for blasts at this site are by default confidential, and only visible to members of the View confidential user group. A site may be configured to make selected blasting information publicly available to all viewers with access to the site. Specific information such as documents and videos may also be marked confidential within the site and never made accessible to users outside the Administrators and View confidential user groups.' Below this is a section header 'Site access roles' and a paragraph: 'Site managers may view and edit the project'.

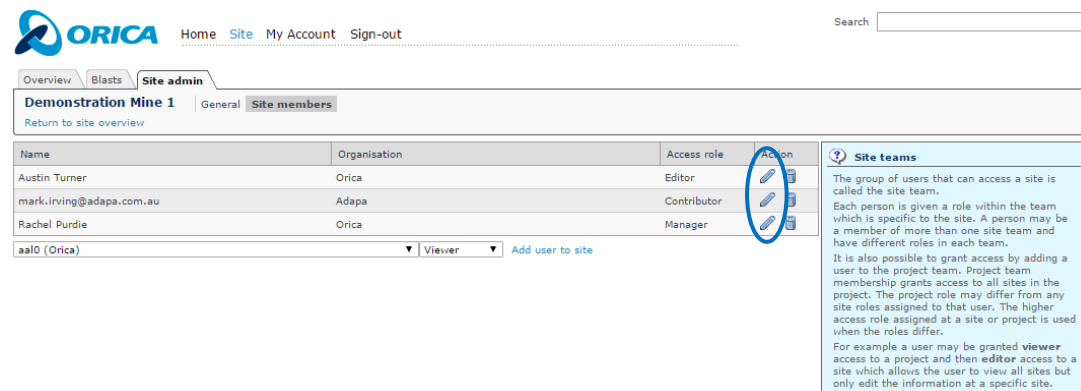
2. Select a user and user type from the drop down boxes.
3. Select **Add user to site**.



The screenshot shows the ORICA Site admin interface. The 'Site admin' tab is active, and the 'Site members' sub-tab is selected. A table lists site members with columns for Name, Organisation, Access role, and Action. The user 'Austin Turner (Orica)' is highlighted, and the 'Add user to site' button in the Action column is circled in blue. A 'Site teams' sidebar on the right provides additional context on site team roles and access levels.

Name	Organisation	Access role	Action
Rachel Purdie	Orica	Manager	[Edit] [Add]
Austin Turner (Orica)		Editor	[Add user to site]

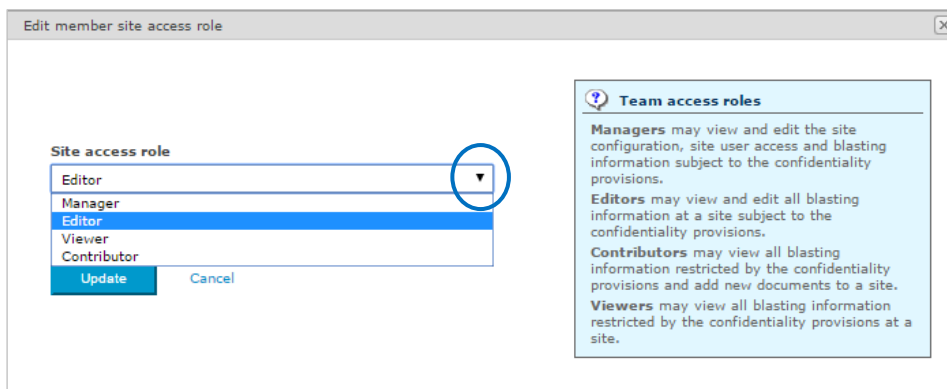
4. Edit a user's access level by clicking on the edit icon next to their name.



This screenshot shows the same ORICA Site admin interface. The 'Action' column for the user 'Austin Turner' is circled in blue, highlighting the edit icon (pencil) next to the user's name. The 'Site teams' sidebar remains visible on the right.

Name	Organisation	Access role	Action
Austin Turner	Orica	Editor	[Edit] [Add]
mark.irving@adapa.com.au	Adapa	Contributor	[Edit] [Add]
Rachel Purdie	Orica	Manager	[Edit] [Add]
aal0 (Orica)		Viewer	[Add user to site]

5. Reassign a user's access by selecting a role from the drop down menu and then selecting **Update**.



The screenshot shows the 'Edit member site access role' dialog box. The 'Site access role' dropdown menu is open, displaying a list of roles: Editor, Manager, Editor, Viewer, and Contributor. The 'Update' button is highlighted in blue. A 'Team access roles' sidebar on the right explains the permissions for Managers, Editors, Contributors, and Viewers.

- You may remove a user from a site using the remove icon next to their name. Note that the user is able to be added back in after this is performed and it does not remove their BlastIQ login.

ORICA Home Site My Account Sign-out

Search

Overview Blasts Site admin

Demonstration Mine 1 General Site members

Return to site overview

Name	Organisation	Access role	Action
Austin Turner	Orica	Editor	
mark.irving@adapa.com.au	Adapa	Contributor	
Rachel Purdie	Orica	Manager	

aa10 (Orica) Viewer Add user to site

Site teams

The group of users that can access a site is called the site team.

Each person is given a role within the team which is specific to the site. A person may be a member of more than one site team and have different roles in each team.

It is also possible to grant access by adding a user to the project team. Project team membership grants access to all sites in the project. The project role may differ from any site roles assigned to that user. The higher access role assigned at a site or project is used when the roles differ.

For example a user may be granted **viewer** access to a project and then **editor** access to a site which allows the user to view all sites but only edit the information at a specific site.

7.2.2 Optional Features

Under the **General** tab on the site admin page, features such as blast plans and site maps can be selected to appear on the site page.

- Click **Edit** under the **Optional features** heading.

ORICA Home Site My Account Sign-out

Search

Overview Blasts Site admin

Demonstration Mine 1 General Site members

Site Demonstration Mine 1 View audit log

Configuration and settings

Optional features

[Edit](#)

Open access (blast data visible all team members)

[Edit](#)

Blast type descriptors

[Edit](#)

Blast measures

Enable the blast outcomes recording function to access

Optional features

The features made available at this site are configurable.

Confidentiality

Blasting parameters and description details for blasts at this site are by default confidential, and only visible to members of the **View confidential** user group. A site may be configured to make selected blasting information publicly available to all viewers with access to the site.

Specific information such as documents and videos may also be marked confidential within the site and never made accessible to users outside the **Administrators** and **View confidential** user groups.

Site access roles

Site **managers** may view and edit the project definition and view and edit information restricted by the confidentiality provisions.

Site **editors** may view and edit all blasting information restricted by the confidentiality provisions.

Site **contributors** may view all blasting information restricted by the confidentiality provisions and add new documents.

Site **viewers** may view all blasting information restricted by the confidentiality provisions at the site.

2. Select the relevant features for your site by checking the tick boxes and click **Update**.

Dialog box titled "Edit optional project functionality" with a close button (X). The list of features includes:

- ☐ 3D face surface
- ☐ Access to automatic fragmentation measurement
- ☐ Access to EPaper blast related documentation
- ☐ Access to LOADPLUS data
- ☐ Access to online vibration modeling
- ☐ Blast plans
- ☐ Document manager for sites
- ☐ Drilling depth control graph
- ☐ Drilling deviation graph
- ☐ Hole temperature
- ☐ Image gallery for sites
- ☐ Job pack definition for blasts
- ☐ KPI management and reporting
- ☐ Link to NCVIB online vibration monitoring software
- ☐ Loading data for blasts
- ☐ Manage environmental monitoring of blasting
- ☐ Only show creation and firing dates
- ☐ Provide site folder for temporary files
- ☐ Record blast outcomes and other measurements
- ☐ Site map
- ☐ Through seam blasting details
- ☐ Video gallery for sites

Buttons: **Update** (circled in blue), Cancel

3. The selected features will be displayed under **Optional features** and additional tabs will be automatically added to the site (depending on the features selected).

ORICA logo and navigation links: Home, Site, My Account, Sign-out. Search bar and Site dropdown (Demonstration Mine 1).

Navigation tabs: Overview, Site Map, Blasts, Performance, Documents, Images, Videos, **Site admin** (circled in blue).

Site: **Demonstration Mine 1**. Sub-tabs: General, Site members, Job pack definition, Map configuration, LoadPlus. Link: View audit log.

Configuration and settings [Edit](#)

Optional features

- Access to LOADPLUS data
- Blast plans
- Document manager for sites
- Drilling depth control graph
- Drilling deviation graph
- Enable measures for blasting
- Enable performance and KPI reporting
- Hole temperature
- Image gallery for sites
- Job pack definition for blasts
- Loading data for blasts
- Manage environmental monitoring of blasting
- Provide site folder for temporary files
- Site overview mapping
- Through seam blasting details
- Video gallery for sites

Confidential blast information [Edit](#)

Blast type descriptors [Edit](#)

- Blast Type

Blast measures [Edit](#)

- Excavator E05 Dig Rate

Settings [Edit](#)

Drilling depth tolerance	1.0 m
Deck weight loading tolerance	10.0 kg
Blast plan detail scaling factor (%)	100.0 %
Hole temperature warm threshold	45.0 °C
Hole temperature hot threshold	55.0 °C
Hole temperature extreme threshold	100.0 °C

Optional features

The features made available at this site are configurable.

Confidentiality

Blasting parameters and description details for blasts at this site are by default confidential, and only visible to members of the **View confidential** user group. A site may be configured to make selected blasting information publicly available to all viewers with access to the site. Specific information such as documents and videos may also be marked confidential within the site and never made accessible to users outside the **Administrators** and **View confidential** user groups.

Site access roles

Site managers may view and edit the project definition and view and edit information restricted by the confidentiality provisions. **Site editors** may view and edit all blasting information restricted by the confidentiality provisions. **Site contributors** may view all blasting information restricted by the confidentiality provisions and add new documents. **Site viewers** may view all blasting information restricted by the confidentiality provisions at the site.

Deleted sites

All deleted sites may be restored using **System administrator** rights.

Blast descriptors and measures

All blasts at this site will have a number of customised text **descriptors** and **measures**. Descriptors are named labels which may take a arbitrary text value or be restricted to a fixed list of possible values. For example a descriptor may be setup with the name "Geology" which takes the values "Sandstone", "Weathered zone" or one named "IS system" with possible values "Signal tube" or "EBS". Blast measures are numerical values which describe either blasting inputs or outcomes. For example a blast input may be "Loading time in minutes" with value "205.0" while an output might be "P80 Fragmentation" with value "1.45".

Terms & Conditions | © Copyright 2015 Orica Limited. All rights reserved. | Build 1.19

NOTICE

The following features are not currently functional:

- 3D face surface
- Access to automatic fragmentation measurement
- Access to EPaper blast related documentation
- Access to online vibration modelling
- Link to NCVIB online vibration monitoring software

7.2.3 Confidential blast information

There are certain items which by default are visible only to Orica users. These items can be made visible to all site users through **Confidential blast information**.

13. Click **Edit** under the **Confidential blast information** heading.

The screenshot displays the Orica BlastIQ Site Manager interface for 'Demonstration Mine 1'. The 'Site admin' tab is active, showing a sidebar with 'Configuration and settings' and 'Optional features'. The 'Confidential blast information' section is highlighted, with an 'Edit' button circled in blue. The 'Optional features' section on the right provides details on confidentiality, site access roles, and blast descriptors.

Configuration and settings

Optional features [Edit](#)

- Access to LOADPLUS data
- Blast plans
- Document manager for sites
- Drilling depth control graph
- Drilling deviation graph
- Enable measures for blasting
- Enable performance and KPI reporting
- Hole temperature
- Image gallery for sites
- Job pack definition for blasts
- Loading data for blasts
- Manage environmental monitoring of blasting
- Provide site folder for temporary files
- Site overview mapping
- Through seam blasting details
- Video gallery for sites

Confidential blast information [Edit](#)

Blast type descriptors [Edit](#)

- Blast Type

Blast measures [Edit](#)

- Excavator E05 Dig Rate

Settings [Edit](#)

Drilling depth tolerance	1.0 m
Deck weight loading tolerance	10.0 kg
Blast plan detail scaling factor (%)	100.0 %
Hole temperature warm threshold	45.0 °C
Hole temperature hot threshold	55.0 °C
Hole temperature extreme threshold	100.0 °C

Optional features

The features made available at this site are configurable.

Confidentiality

Blasting parameters and description details for blasts at this site are by default confidential, and only visible to members of the **View confidential** user group. A site may be configured to make selected blasting information publicly available to all viewers with access to the site.

Specific information such as documents and videos may also be marked confidential within the site and never made accessible to users outside the **Administrators** and **View confidential** user groups.

Site access roles

Site managers may view and edit the project definition and view and edit information restricted by the confidentiality provisions.

Site editors may view and edit all blasting information restricted by the confidentiality provisions.

Site contributors may view all blasting information restricted by the confidentiality provisions and add new documents.

Site viewers may view all blasting information restricted by the confidentiality provisions at the site.

Deleted sites

All deleted sites may be restored using **System** administrator rights.

Blast descriptors and measures

All blasts at this site will have a number of customised text **descriptors** and **measures**. Descriptors are named labels which may take a arbitrary text value or be restricted to a fixed list of possible values.

For example a descriptor may be setup with the name "Geology" which takes the values "Sandstone", "Weathered zone" or one named "IS system" with possible values "Signal tube" or "EBB".

Blast measures are numerical values which describe either blasting inputs or outcomes. For example a blast input may be "Loading time in minutes" with value "205.0" while an output might be "P80 Fragmentation" with value "1.45".

[Terms & Conditions](#) | © Copyright 2015 Orica Limited. All rights reserved. | Build 1.19

14. Select items to make confidential by checking the tick boxes and then selecting **Update**.

Set classes of blast information confidential

- ☐ Blast measures
- ☐ EBS timing details
- ☐ KPIs
- ☐ Loading details
- ☐ Pattern details
- ☐ Powder factors
- ☐ Timing details
- ☐ Uploaded SP5 files

Update Cancel

Selected items will be shown under the **Confidential blast information** heading and only be visible to the View Confidential User group.

Configuration and settings

Optional features [Edit](#)

- Access to LOADPLUS data
- Blast plans
- Document manager for sites
- Drilling depth control graph
- Drilling deviation graph
- Enable measures for blasting
- Enable performance and KPI reporting
- Hole temperature
- Image gallery for sites
- Job pack definition for blasts
- Loading data for blasts
- Manage environmental monitoring of blasting
- Provide site folder for temporary files
- Site overview mapping
- Through seam blasting details
- Video gallery for sites

Confidential blast information [Edit](#)

Blast type descriptors [Edit](#)

- Blast Type

Blast measures [Edit](#)

- Excavator E05 Dig Rate

Settings [Edit](#)

Drilling depth tolerance	1.0 m
Deck weight loading tolerance	10.0 kg
Blast plan detail scaling factor (%)	100.0 %
Hole temperature warm threshold	45.0 °C
Hole temperature hot threshold	55.0 °C
Hole temperature extreme threshold	100.0 °C

Optional features

The features made available at this is configurable.

Confidentiality

Blasting parameters and description details for blasts at this site are by default confidential, and only visible to members of the **View confidential** user group. A site may be configured to make selected blasting information publicly available to all viewers with access to the site.

Specific information such as documents and videos may also be marked confidential within the site and never made accessible to users outside the **Administrators** and **View confidential** user groups.

Site access roles

Site **managers** may view and edit the project definition and view and edit information restricted by the confidentiality provisions.

Site **editors** may view and edit all blasting information restricted by the confidentiality provisions.

Site **contributors** may view all blasting information restricted by the confidentiality provisions and add new documents.

Site **viewers** may view all blasting information restricted by the confidentiality provisions at the site.

Deleted sites

All deleted sites may be restored using **System** administrator rights.

Blast descriptors and measures

All blasts at this site will have a number of customised text **descriptors** and **measures**. Descriptors are named labels which may take an arbitrary text value or be restricted to a fixed list of possible values.

For example a descriptor may be setup with the name "Geology" which takes the values "Sandstone", "Weathered zone" or one named "IS system" with possible values "Signal tube" or "EBS".

Blast measures are numerical values which describe either blasting inputs or outcomes. For example a blast input may be "Loading time in minutes" with value "205.0" while an output might be "P80 Fragmentation" with value "1.45".

7.2.4 Blast Type Descriptors

Blast type descriptors are items used to identify certain characteristics of the blasts. These are customised text descriptors to filter and sort blasts into categories (for example blast type/pre-split) as per site procedure.

1. Click **Edit** under the **Blast type descriptors** heading.

The screenshot shows the Orica BlastIQ Site Manager interface. The top navigation bar includes the Orica logo, 'Home', 'Site', 'My Account', and 'Sign-out'. A search bar and a site dropdown menu (set to 'Demonstration Mine 1') are on the right. Below the navigation bar, a breadcrumb trail shows 'Overview' > 'Site Map' > 'Blasts' > 'Performance' > 'Documents' > 'Images' > 'Videos' > 'Site admin'. The 'Site admin' section is active, showing 'Demonstration Mine 1' and a 'View audit log' link. The main content area is divided into two columns. The left column, titled 'Configuration and settings', contains several sections: 'Optional features' (with an 'Edit' link), 'Confidential blast information' (with an 'Edit' link), 'Blast type descriptors' (with an 'Edit' link circled in red), 'Blast measures' (with an 'Edit' link), and 'Settings' (with an 'Edit' link). The 'Blast type descriptors' section lists 'Blast Type'. The right column, titled 'Optional features', contains sections for 'Confidentiality', 'Site access roles', 'Deleted sites', and 'Blast descriptors and measures'. The footer of the page reads 'Terms & Conditions | © Copyright 2015 Orica Limited. All rights reserved. | Build 1.19'.

2. Activate a descriptor by selecting **Activate**.

The screenshot shows the Orica BlastIQ web application. At the top, there's a navigation bar with the Orica logo and links for Home, Site, My Account, and Sign-out. Below this is a search bar. The main navigation menu includes Overview, Site Map, Blasts, Performance, Documents, Images, Videos, and Site admin. The current page is titled 'Edit blast descriptors for project: Demonstration Mine 1' with a link to 'Return to site admin'.

On the left, there are six descriptor cards, each labeled 'Descriptor 1 (not in use)' through 'Descriptor 6 (not in use)'. Each card has an 'Activate' button. The 'Activate' button for Descriptor 1 is circled in blue.

On the right, there is a blue information box titled 'Blast descriptors'. It contains the following text:

Blast descriptors
All blasts at this site will have a number of customised text **descriptors**. Descriptors are blast labels which may take an arbitrary text value or be restricted to a list of possible values. For example a descriptor may be setup with the name "Geology" which takes the values "Sandstone", "Weathered zone" or one named "IS system" with possible values "Signal tube" or "EBS". Use blast measures to record text values or attributes associated with each blast. Dont record numerical values in descriptors but rather use blast measures instead.

Confidentiality
Blasting descriptors may contain confidential information and should not be viewed by external users. A descriptor can be marked confidential to make its values only accessible by users in **Administrator** and the **Orica employee** user groups. All external users are by default created in the **Valued client** group and information marked confidential would not be visible.

Fixed list values
A blast descriptor may be set up to allow free text input or only accept values from a predefined list.

Filtering blast data
Blasting descriptors which may be used to filter which blasts are shown on the site map and within the blast are selected in the performance module. Sometimes it may be appropriate to choose not to allow a descriptor to be used for filtering in order to simplify the filtering interface.

Information relating to blast descriptors is given in the blue box and summarised below:

Confidentiality –

- Descriptors can be marked confidential to make its values only visible to Orica users.

Fixed list values –

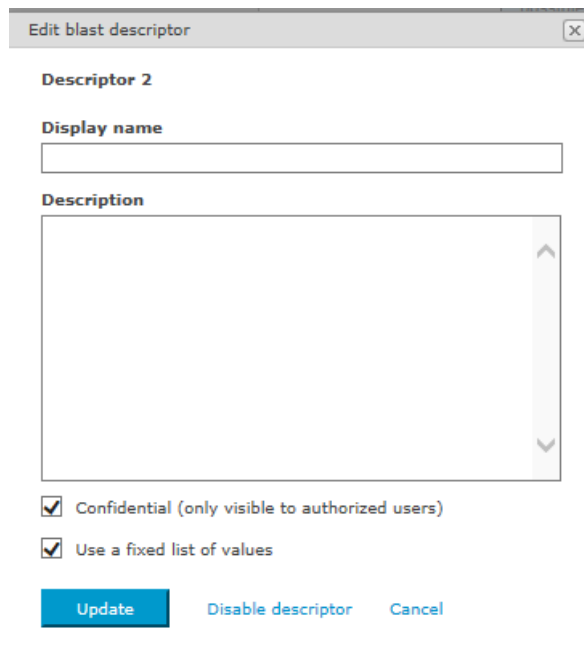
- Descriptors may be set up to allow free text input or only accept values from a pre-defined list.

Filtering blast data –

- Descriptors can be filtered to show only certain types of blasts on the site map
- Sometimes it may be appropriate to choose not to allow a descriptor to be used for filtering in order to simplify the filtering interface.

By default, all blast descriptors are turned off and must be activated and configured before use.

3. Configure the blast descriptor by filling in the information in the **Edit blast descriptor** box.



Edit blast descriptor

Descriptor 2

Display name

Description

☒ Confidential (only visible to authorized users)

☒ Use a fixed list of values

Update **Disable descriptor** **Cancel**

Display name –

- Name that will be displayed to identify the type of blast descriptor.

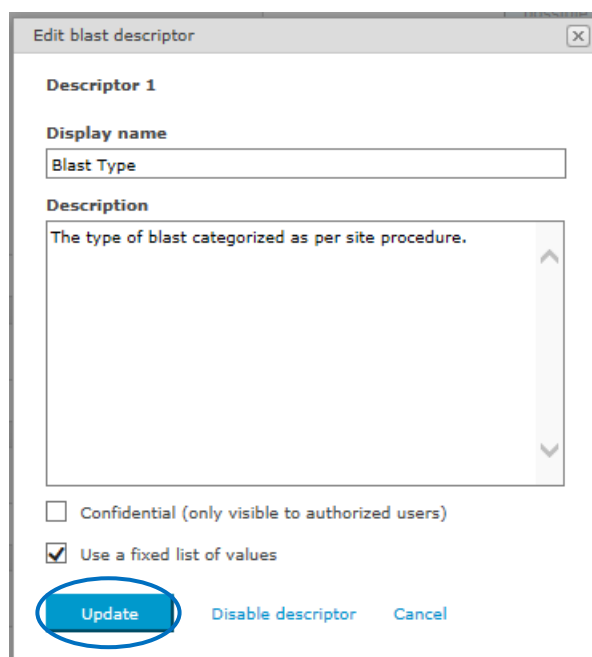
Confidential descriptor –

- The blast descriptor will be only visible to Orica users if confidential descriptor is selected.

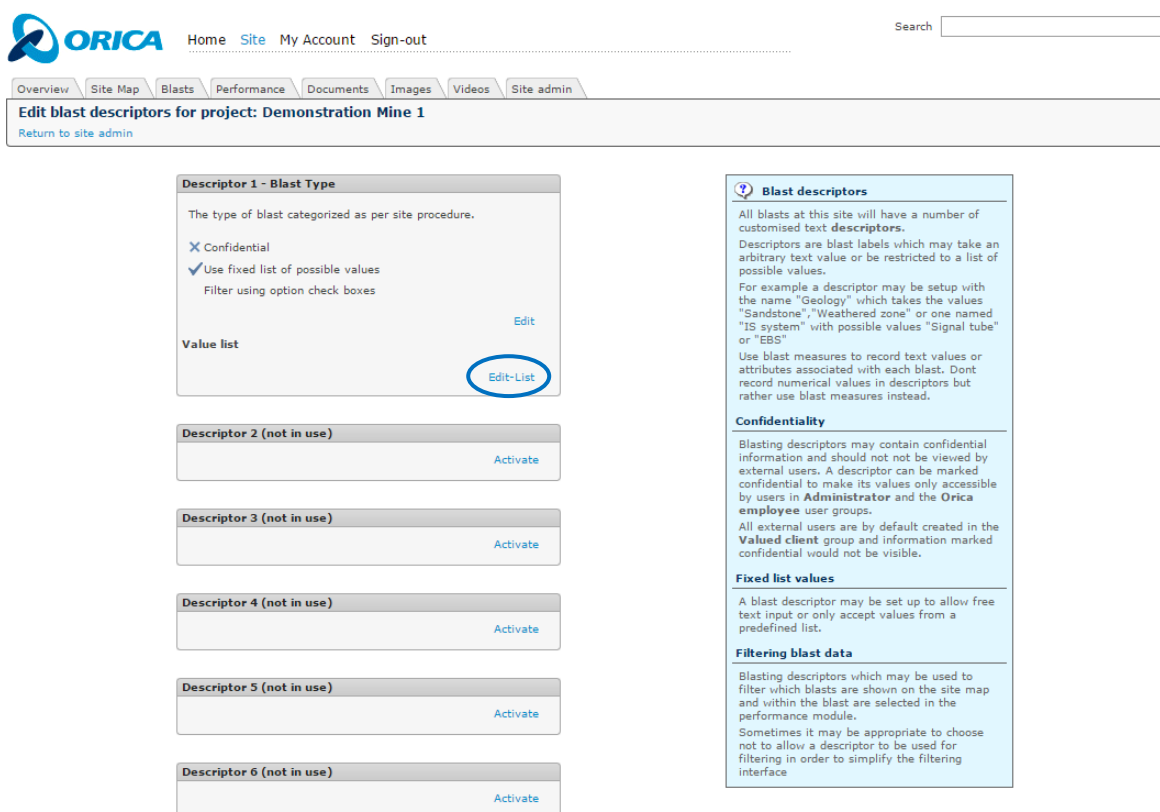
Use a fixed list of values –

- It is recommended to keep this box ticked. This will make it easier to filter on a site map, and to sort and filter on the blast list (see Section 4.4 Viewing the Site Map).

4. Once the descriptor information has been entered click **Update**.



5. If the “Use a fixed list of values” was selected, an option to edit the **Value list** will appear. Click **Edit List** to edit the valve list.



- Enter in the values associated with the descriptor, and for each value click **Add new**. Click **Update** once all values are entered.

Edit blast descriptor list values

Blast Type	
Lookup values	
Production	Edit Delete
Pre-split	Edit Delete
Overburden	Edit Delete

[Add-new](#)

[Update](#)
[Clear](#)

- The list of values will now appear in the descriptor. Click **Return to site admin**.

ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos Site admin

Edit blast descriptors for project: Demonstration Mine 1

[Return to site admin](#)

Descriptor 1 - Blast Type

The type of blast categorized as per site procedure.

☒ Confidential
☒ Use fixed list of possible values
 Filter using option check boxes

[Edit](#)

Value list

- Production
- Pre-split
- Overburden

[Edit-List](#)

Descriptor 2 (not in use)

[Activate](#)

Descriptor 3 (not in use)

[Activate](#)

Descriptor 4 (not in use)

[Activate](#)

Descriptor 5 (not in use)

[Activate](#)

Descriptor 6 (not in use)

[Activate](#)

Blast descriptors

All blasts at this site will have a number of customised text **descriptors**. Descriptors are blast labels which may take an arbitrary text value or be restricted to a list of possible values.

For example a descriptor may be setup with the name "Geology" which takes the values "Sandstone", "Weathered zone" or one named "IS system" with possible values "Signal tube" or "EBS"

Use blast measures to record text values or attributes associated with each blast. Dont record numerical values in descriptors but rather use blast measures instead.

Confidentiality

Blasting descriptors may contain confidential information and should not be viewed by external users. A descriptor can be marked confidential to make its values only accessible by users in **Administrator** and the **Orica employee** user groups.

All external users are by default created in the **Valued client** group and information marked confidential would not be visible.

Fixed list values

A blast descriptor may be set up to allow free text input or only accept values from a predefined list.

Filtering blast data

Blasting descriptors which may be used to filter which blasts are shown on the site map and within the blast are selected in the performance module.

Sometimes it may be appropriate to choose not to allow a descriptor to be used for filtering in order to simplify the filtering interface

7.2.5 Blast Measures

The following describes how to create blast measures for the site. Blast measures are numerical values which describe the blast (for example "Loading time in minutes" with a value of 205.5).

1. Click **Edit** under the **Blast measures** heading.

The screenshot shows the ORICA BlastIQ Site admin interface for 'Demonstration Mine 1'. The 'Blast measures' section is highlighted with a blue circle, and the 'Edit' link next to it is also circled in blue. The interface shows various configuration options like 'Optional features', 'Confidential blast information', 'Blast type descriptors', and 'Settings'.

Configuration and settings

Optional features [Edit](#)

- Access to LOADPLUS data
- Blast plans
- Document manager for sites
- Drilling depth control graph
- Drilling deviation graph
- Enable measures for blasting
- Enable performance and KPI reporting
- Hole temperature
- Image gallery for sites
- Job pack definition for blasts
- Loading data for blasts
- Manage environmental monitoring of blasting
- Provide site folder for temporary files
- Site overview mapping
- Through seam blasting details
- Video gallery for sites

Confidential blast information [Edit](#)

Blast type descriptors [Edit](#)

- Blast Type

Blast measures [Edit](#)

- Excavator E05 Dig Rate

Settings [Edit](#)

Drilling depth tolerance	1.0 m
Deck weight loading tolerance	10.0 kg
Blast plan detail scaling factor (%)	100.0 %
Hole temperature warm threshold	45.0 °C
Hole temperature hot threshold	55.0 °C
Hole temperature extreme threshold	100.0 °C

Optional features

The features made available at this is configurable.

Confidentiality

Blasting parameters and description details for blasts at this site are by default confidential, and only visible to members of the **View confidential** user group. A site may be configured to make selected blasting information publicly available to all viewers with access to the site.

Specific information such as documents and videos may also be marked confidential within the site and never made accessible to users outside the **Administrators** and **View confidential** user groups.

Site access roles

Site **managers** may view and edit the project definition and view and edit information restricted by the confidentiality provisions.

Site **editors** may view and edit all blasting information restricted by the confidentiality provisions.

Site **contributors** may view all blasting information restricted by the confidentiality provisions and add new documents.

Site **viewers** may view all blasting information restricted by the confidentiality provisions at the site.

Deleted sites

All deleted sites may be restored using **System** administrator rights.

Blast descriptors and measures

All blasts at this site will have a number of customised text **descriptors** and **measures**. Descriptors are named labels which may take a arbitrary text value or be restricted to a fixed list of possible values.

For example a descriptor may be setup with the name "Geology" which takes the values "Sandstone", "Weathered zone" or one named "IS system" with possible values "Signal tube" or "EBS".

Blast measures are numerical values which describe either blasting inputs or outcomes. For example a blast input may be "Loading time in minutes" with value "205.0" while an output might be "P80 Fragmentation" with value "1.45".

Terms & Conditions | © Copyright 2015 Orica Limited. All rights reserved. | Build 1.19

2. Select **Create a new measure**.

The screenshot shows the ORICA BlastIQ Site admin interface for 'Demonstration Mine 1'. The 'Edit blast measures for project: Demonstration Mine 1' page is displayed. The 'Create a new measure' link is circled in blue. The table below shows columns for 'In use', 'Display name', 'Description', 'Confidential', 'KPI', 'Map data', and 'Action'. The table is currently empty, displaying 'No data to display'.

Edit blast measures for project: Demonstration Mine 1

[Create a new measure](#) [Return to site admin](#)

In use	Display name	Description	Confidential	KPI	Map data	Action
No data to display						

- Configure the blast measure by filling in the information in the **Create blast measure** box.

ORICA Home Site My Account Sign-out

Search

Site **Demonstration Mine 1**

Overview Site Map **Blasts** Performance Documents Images Videos Site admin

Create blast measure

Display name

Description

Connection with uploaded data
Do not use SHOTPlus5 uploaded data for this measure

Units

Num of decimal places

Maximum valid value

Minimum valid value

Map Display Palette
Do not display on map

☐ Percentage value
☐ Is confidential
☐ Use as key performance indicator (KPI)

Add Cancel

Terms & Conditions | © Copyright 2015 Orica Limited. All rights reserved. | Build 1.19

Display name –

- Name that will be displayed to identify the type of blast measure.

Connection with uploaded data –

- Data can be extracted from SHOTPlus5™ or from environmental values recorded against points of interest.
- Data can also be entered manually by selecting “Don’t use uploaded data for this measure”.

Connection with uploaded data

Dont use uploaded data for this measure

Dont use uploaded data for this measure

Digability performance 0-100% from SP5

Dust generation performance 0-100% from SP5

Floor control performance 0-100% from SP5

Fragmentation performance 0-100% from SP5

Largest peak recorded airblast value from any POI

Largest recorded peak particle measurement from any POI

Mesh size passing 20% of material from assessment systems

Mesh size passing 80% of material from assessment systems

Overbreak performance 0-100% from SP5

SP5 calculated powder factor

Throw performance 0-100% from SP5

Wall control performance 0-100% from SP5

Units –

- Type the unit's abbreviation for the measure (eg. bcm/hr). Note: These units will not be affected by the user's unit settings.

Num of decimal places –

- Restrict the number of decimal places a user can enter for the measure

Maximum and Minimum valid value –

- Maximum and minimum values can be defined for the measure to reduce errors.

Map Display Palette –

- Select the colour scheme used for displaying this measure on the site map.

Percentage value –

- The measure can be displayed as a percentage

Is confidential –

- The measure can be confidential (will only be visible to Orica users)

Use as key performance indicator (KPI) –

- The measure can be put as a key performance indicator and will appear in the performance tab.

4. Enter relevant values for the measure and click **Add**.

Display name
Excavator E05 Dig Rate

Description
Dig rate for Hitachi 3500 number EX05

Connection with uploaded data
Do not use SHOTPlus5 uploaded data for this measure

Units
tne/hr

Num of decimal places
0

Maximum valid value
10000

Minimum valid value
0

Map Display Palette
Do not display on map

☐ Percentage value

☐ Is confidential

☒ Use as key performance indicator (KPI)

Add [Cancel](#)

Blast measures will then appear in list form on the page. Use the edit icon to make changes to the blast measure and the up and down arrows to change the order that the measures will be displayed in lists.

ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos Site admin

Edit blast measures for project: Demonstration Mine 1

[Create a new measure](#) [Return to site admin](#)

In use	Display name	Description	Confidential	KPI	Map data	Action
✓	Excavator E05 Dig Rate	Dig rate for Hitachi 3500 number EX05.	✗	✓	✓	  

A blast measure can also be made inactive, meaning that new blasts from that point onwards will not prompt for the measure to be entered. Historical data for that measure will remain stored.

7.2.6 Settings

The following describes how to modify the settings for the site.

1. Click **Edit** under the **Settings** heading.

The screenshot shows the ORICA BlastIQ Site Manager interface for 'Demonstration Mine 1'. The 'Site admin' tab is active, and the 'Settings' section is expanded. The 'Settings' table lists various parameters with their current values and an 'Edit' link circled in blue.

Configuration and settings		Edit
Optional features		
<ul style="list-style-type: none"> Access to LOADPLUS data Blast plans Document manager for sites Drilling depth control graph Drilling deviation graph Enable measures for blasting Enable performance and KPI reporting Hole temperature Image gallery for sites Job pack definition for blasts Loading data for blasts Manage environmental monitoring of blasting Provide site folder for temporary files Site overview mapping Through seam blasting details Video gallery for sites 		
Confidential blast information		
Blast type descriptors		
<ul style="list-style-type: none"> Blast Type 		
Blast measures		
<ul style="list-style-type: none"> Excavator E05 Dig Rate 		
Settings		Edit
Drilling depth tolerance	1.0 m	
Deck weight loading tolerance	10.0 kg	
Blast plan detail scaling factor (%)	100.0 %	
Hole temperature warm threshold	45.0 °C	
Hole temperature hot threshold	55.0 °C	
Hole temperature extreme threshold	100.0 °C	

Optional features

The features made available at this site are configurable.

Confidentiality

Blasting parameters and description details for blasts at this site are by default confidential, and only visible to members of the **View confidential** user group. A site may be configured to make selected blasting information publicly available to all viewers with access to the site.

Specific information such as documents and videos may also be marked confidential within the site and never made accessible to users outside the **Administrators** and **View confidential** user groups.

Site access roles

Site **managers** may view and edit the project definition and view and edit information restricted by the confidentiality provisions.

Site **editors** may view and edit all blasting information restricted by the confidentiality provisions.

Site **contributors** may view all blasting information restricted by the confidentiality provisions and add new documents.

Site **viewers** may view all blasting information restricted by the confidentiality provisions at the site.

Deleted sites

All deleted sites may be restored using **System** administrator rights.

Blast descriptors and measures

All blasts at this site will have a number of customised text **descriptors** and **measures**.

Descriptors are named labels which may take an arbitrary text value or be restricted to a fixed list of possible values.

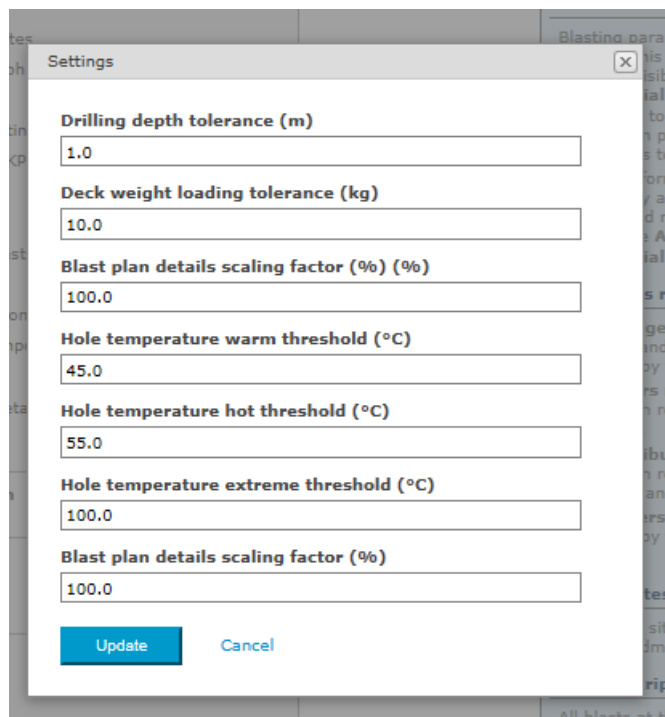
For example a descriptor may be setup with the name "Geology" which takes the values "Sandstone", "Weathered zone" or one named "IS system" with possible values "Signal tube" or "EBS".

Blast measures are numerical values which describe either blasting inputs or outcomes.

For example a blast input may be "Loading time in minutes" with value "205.0" while an output might be "P80 Fragmentation" with value "1.45".

Terms & Conditions | © Copyright 2015 Orica Limited. All rights reserved. | Build 1.19

2. Enter any new values in the appropriate field.



The screenshot shows a 'Settings' dialog box with the following fields and values:

- Drilling depth tolerance (m): 1.0
- Deck weight loading tolerance (kg): 10.0
- Blast plan details scaling factor (%) (%): 100.0
- Hole temperature warm threshold (°C): 45.0
- Hole temperature hot threshold (°C): 55.0
- Hole temperature extreme threshold (°C): 100.0
- Blast plan details scaling factor (%) (%): 100.0

At the bottom of the dialog box are two buttons: 'Update' and 'Cancel'.

NOTICE

Drilling deck tolerance and deck weight loading tolerance are used to highlight out of tolerance values on maps and plans.

Blast plan details scaling factor is used to change the size of text and icons on the blast plan/s.

Temperature thresholds should be set according to the site's hot ground management plan.

3. Select **Update**.

7.3 CREATING A JOB PACK DEFINITION

To manage job packs through BlastIQ, a job pack definition must be created. The job pack definition will outline the items that need to be completed in the job pack.

1. Under **Job pack definition** select **Add New Job Pack Item**.



2. Enter the details of the job pack item.

A screenshot of a web-based 'Update' dialog box. The dialog has a title bar with 'Update' and a close button. It contains several form fields: 'Description' (a text input), 'Source of data for this item' (a dropdown menu with 'File' selected), 'Job pack item is optional' (a checkbox), 'Confidential' (a checkbox), 'Allowed file extensions (e.g. ".docx .doc .rtf")' (a text input), 'Section to place this job pack under' (a dropdown menu), 'Notes' (a large text area), and 'Document Folder' (a text input). At the bottom of the dialog are two buttons: 'Update' (in blue) and 'Cancel'.

Description –

- Name of the job pack item.

Source of data for this item –

- The source of data for the item can be selected as **File** or **Manual** from the drop down list (Sections 7.3.1 and 7.3.2 give additional information for configuring the item for each source).

Job pack item is optional –

- If the job pack item is optional, it does not have to be complete for the job pack to be audited as “complete”.

Confidential –

- Selecting **Confidential** will make the item only visible to Orica users.

Allowed file extensions –

- Entering the allowed file extensions provides a filter to restrict the file types that users can load against the item. For example a survey file that must be uploaded in the correct format for users to view the file on their computers. This will only appear if **File** is selected for the source of data. Multiple file extensions should be separated by **spaces**.

Section to place this job pack under –

- This will create a high level section heading that the job pack item will be placed under.
- A new heading can be created, or an existing one selected from the drop down list.

Notes –

- Notes can be added to describe the item.

Document Folder –

- Entering a document folder will create a folder in the documents tab under the blast (document management is explained in Section 6.10).
- The file from the job pack item will be stored in this folder after it is uploaded.

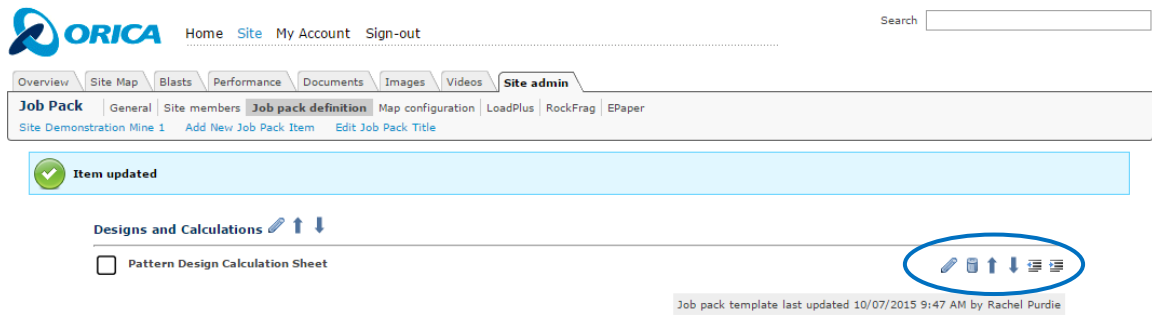
3. After information is added, click **Update**.

The screenshot shows a software window titled "Update" with a close button (X) in the top right corner. The window contains several input fields and checkboxes:

- Description:** A text box containing "Pattern Design Calculation Sheet".
- Source of data for this item:** A dropdown menu with "File" selected.
- Job pack item is optional:** An unchecked checkbox.
- Confidential:** An unchecked checkbox.
- Allowed file extensions (e.g. ".docx .doc .rtf"):** A text box containing ".xls .xlsx".
- Section to place this job pack under:** A dropdown menu with "Designs and Calculations" selected.
- Notes:** A text area containing "Use the design calculation template found in the site templates folder".
- Document Folder:** A text box containing "Pre-Blast Documents".

At the bottom of the window, there are two buttons: "Update" (highlighted with a red circle) and "Cancel".

4. The job pack item will then be displayed in list form. Items can be edited, removed, re-ordered with up/down arrows and indented using the toggle keys next to the item.



5. All job pack items will appear on the page after they are entered, and section headings can be edited and re-ordered with up/down arrows.



7.3.1 Configuring to Upload a Job Pack Item from File

Selecting **File** as the source of data for the item will give an upload button next to the job pack item. It will also give the option to specify **Allowed file extensions**.

The screenshot shows a dialog box titled "Update" with the following fields and controls:

- Description:** A text input field.
- Source of data for this item:** A dropdown menu currently showing "File".
- Job pack item is optional:** A checkbox.
- Confidential:** A checkbox.
- Allowed file extensions (e.g. ".docx .doc .rtf"):** A text input field, which is circled in blue in the image.
- Section to place this job pack under:** A dropdown menu.
- Notes:** A large text area.
- Document Folder:** A text input field.
- Buttons:** "Update" (blue) and "Cancel" (grey) at the bottom.

Allowed file extensions –

- Entering the allowed file extensions provides a filter to restrict the file types that users can load against the item. For example a survey file that must be uploaded in the correct format for users to view the file on their computers.

7.3.2 Configuring to Manually Enter a Job Pack Item

Selecting **Manual** as the source of data makes the item a tick box which can be checked when appropriate (for example “Approved for Drilling”). When the box is ticked, it applies a time stamp and records the user who ticked the box. A user can also make a comment associated with the item.

The screenshot shows a software window titled "Update" with a close button in the top right corner. The window contains the following elements:

- Description:** A text input field containing "Approved for Drilling".
- Source of data for this item:** A dropdown menu with "Manual" selected.
- Job pack item is optional:** An unchecked checkbox.
- Confidential:** An unchecked checkbox.
- Section to place this job pack under:** A dropdown menu with "Approvals" selected.
- Notes:** A text area with a yellow background containing the text: "Customer drill and blast supervisor must tick this before sending file to drill."
- Document Folder:** An empty text input field.
- Buttons:** A blue "Update" button and a blue "Cancel" button at the bottom.

7.4 CONFIGURING SITE MAP

The site map is an optional feature that can be turned on through the Features selection.

7.4.1 Define Site Map Coordinate System

The following describes how to select the correct coordinate system for the site location.

1. Under **Map configuration** select **Edit**.

ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos **Site admin**

Demonstration Mine 1 General Site members Job pack definition **Map configuration** LoadPlus RockFrag EPaper

Site Demonstration Mine 1 View site map

Site mapping

NCVIB Project Id

Coordinate system
Not defined - No mapping is possible until defined
Altitude at zero elevation ?

Map centred at (latitude,longitude)
Not defined

Use white background

Edit

Upload DXF, coordinated JPEG image or SPS overlay (.xol)
Execute a re-mapping job
Edit site overlay layers
Go to site map

Map layers

Group	Layer	Source of data
Blasts	Blast centre	Shows a marker corresponding to the centre of each blast
	Blast bounds	Shows a polygon marking the boundary of each blast
	Excavator E05 Dig Rate	Visualises the values of the 'Excavator E05 Dig Rate' measure as a marker for each blast
	PPV Exceedance	Visualises the values of the 'Max PPV' measure as a marker for each blast
	Airblast Exceedance	Visualises the values of the 'Max Airblast' measure as a marker for each blast
	Filter by Blast Type	Filters the display of blast markers which match values of the 'Blast Type' descriptor

2. Choose a coordinate system.

If information on your site coordinate system has been communicated to the system administrator, they can tell you which coordinate system to select, or they can select it for you.

ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos Site admin

Edit site map configuration

NCVib map server project ID

Coordinate system
No coordinate system defined

GPS altitude of zero site elevation (m)

☐ Use black map background

Update **Cancel**

Local coordinates defined using 3 control points –

- If a site is using a custom coordinate system, the coordinates can be transformed by using 3 known points on the site by entering their latitude and longitude and their easting and northing. Uncheck the 'Use coordinates in metres' box if the easting and northing values are entered in feet.

NCVib map server project ID

Coordinate system
Local coordinates defined using 3 control points

GPS altitude of zero site elevation (m)
0.0

Local control points

Point	Latitude (°N)	Longitude (°E)	Easting (m)	Northing (m)
A				
B				
C				

☒ Use coordinates in metres (otherwise use feet)

☐ Use black map background

Update Cancel

Local coordinates defined using custom transform parameters –

- The site surveyor may be able to provide custom transformation parameters.

NCVib map server project ID

Coordinate system
Local coordinates defined using 3 control points

GPS altitude of zero site elevation (m)
0.0

Local control points

Point	Latitude (°N)	Longitude (°E)	Easting (m)	Northing (m)
A				
B				
C				

☒ Use coordinates in metres (otherwise use feet)

☐ Use black map background

Update Cancel

- Enter the correction number in **GPS altitude of zero elevation** if the site uses an elevation that is different to GPS elevation.

ORICA Home Site My Account Sign-out

Search

Overview Site Map Blasts Performance Documents Images Videos Site admin

Edit site map configuration

NCVib map server project ID

Coordinate system
Australia MGA Zone 50/GDA94 Suitable for 114°E to 120°E

GPS altitude of zero site elevation (m)
0

☐ Use black map background

Update Cancel

4. Select **Update**.

ORICA Home Site My Account Sign-out

Overview Site Map Blasts Performance Documents Images Videos Site admin

Edit site map configuration

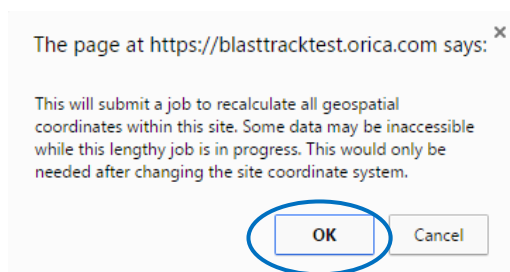
NCVib map server project ID

Coordinate system
Australia MGA Zone 50/GDA94 Suitable for 114°E to 120°E

GPS altitude of zero site elevation (m)
0

☐ Use black map background

Update Cancel

5. Select **OK**.6. If the coordinate system is changed after data is entered, select **Execute a re-mapping job** in **Map configuration**. This will transform all current site data to the new coordinate system.

ORICA Home Site My Account Sign-out

Overview Site Map Blasts Performance Documents Images Videos Site admin

Demonstration Mine 1 General Site members Job pack definition **Map configuration** LoadPlus RockFrag EPaper

Site Demonstration Mine 1 View site map

Site coordinate system has been updated to use "MGA Zone 50/GDA94 Suitable for 114°E to 120°E.". If this site contains existing coordinates these may need to be updated to the new site coordinate system by executing a re-mapping job.

Site mapping

NCVIB Project Id

Coordinate system
MGA Zone 50/GDA94 Suitable for 114°E to 120°E.
Altitude at zero elevation 0.0 m

Map centred at (latitude,longitude)
Not defined

Use white background

Execute re-mapping job

Edit site overlay layers

Go to site map

Map layers

Group	Layer	Source of data
Blasts	Blast centre	Shows a marker corresponding to the centre of each blast
	Blast bounds	Shows a polygon marking the boundary of each blast
	Excavator E05 Dig Rate	Visualises the values of the 'Excavator E05 Dig Rate' measure as a marker for each blast
	PPV Exceedance	Visualises the values of the 'Max PPV' measure as a marker for each blast
	Airblast Exceedance	Visualises the values of the 'Max Airblast' measure as a marker for each blast
	Filter by Blast Type	Filters the display of blast markers which match values of the 'Blast Type' descriptor

7.4.2 Uploading a Map Overlay

The site map may contain a number of overlay layers containing lines, polygons, circles and text, or a georeferenced jpeg image. An imported layer either replaces the contents of existing layers with the same names or creates additional layers with the imported layer names.

1. Select **Upload DXF, coordinated JPEG image or SP5 overlay (.xol)**.

The screenshot shows the ORICA Site Manager interface. At the top, there is a navigation bar with links for Home, Site, My Account, and Sign-out. Below this is a search bar. The main navigation menu includes Overview, Site Map, Blasts, Performance, Documents, Images, Videos, and Site admin. The 'Site admin' menu is expanded, showing options like General, Site members, Job pack definition, Map configuration, LoadPlus, RockFrag, and EPaper. The 'Map configuration' option is selected. A notification banner at the top states: 'Site coordinate system has been updated to use "MGA Zone 50/GDA94 Suitable for 114°E to 120°E.". If this site contains existing coordinates these may need to be updated to the new site coordinate system by executing a re-mapping job.'

The 'Site mapping' configuration page is displayed. It includes fields for NCVIB Project Id, Coordinate system (MGA Zone 50/GDA94 Suitable for 114°E to 120°E, Altitude at zero elevation 0.0 m), and Map centred at (latitude, longitude) (Not defined). There is a 'Use white background' checkbox and an 'Edit' button. The 'Upload DXF, coordinated JPEG image or SP5 overlay (.xol)' option is circled in blue. Below this are links for 'Execute a re-mapping job', 'Edit site overlay layers', and 'Go to site map'.


The 'Map layers' section contains a table with the following data:

Group	Layer	Source of data
Blasts	Blast centre	Shows a marker corresponding to the centre of each blast
	Blast bounds	Shows a polygon marking the boundary of each blast
	Excavator E05 Dig Rate	Visualises the values of the 'Excavator E05 Dig Rate' measure as a marker for each blast
	PPV Exceedance	Visualises the values of the 'Max PPV' measure as a marker for each blast
	Airblast Exceedance	Visualises the values of the 'Max Airblast' measure as a marker for each blast
	Filter by Blast Type	Filters the display of blast markers which match values of the 'Blast Type' descriptor

2. Browse for the relevant file and click **Upload**.

The screenshot shows a dialog box titled 'Upload map data overlay file from SHOTPlus™5'. It contains a text field with the filename 'CB_EXTENTS.xol' and a 'Browse...' button. Below the text field is a blue 'Upload' button, which is circled in blue, and a 'Cancel' button.

- If uploading a DXF or XOL file, individual layers can be selected for upload. Each layer will be selectable on the site map individually. This screen also displays how many items are on each respective layer.


[Home](#)
[Site](#)
[My Account](#)
[Sign-out](#)

Search

[Overview](#)
[Site Map](#)
[Blasts](#)
[Performance](#)
[Documents](#)
[Images](#)
[Videos](#)
[Site admin](#)

Pending overlay layer import request for site [Demonstration Mine 1]

Please select layers from file "CB_EXTENTS.xol" to be added to the site map or their contents updated.

Process	Action	Layer name	Items	Confidential
<input type="checkbox"/>	New	CB_EXTENTS	630	<input type="checkbox"/>

There are currently 0 layers defined as map overlays and at most only 8 overlays can be used

Process

Abort

Processing overlays

This form setups up the background job to import graphical data onto the site map. The site map may contain a number of overlay layers up to the maximum configured limit. Layers may contain either vector graphics comprising lines, polygons, circles and text, or a geo-referenced jpeg image.

Importing a .dxf or SHOTPlus 5 .xol file allows multiple layers to be defined at once while image files define a single layer.

Imported layers either replace the contents of existing layers with the same names or creates additional layers with the imported layer names. The layer names can be subsequently edited using the "edit site overlay layers" link on the next page. Layers may be marked confidential and will not be visible to non-Orica users.

DXF and XOL vector graphics

DXF and XOL files defined a number of layers containing lines, polygons, circles, and text. These coordinates should be defined in metres. XOL files allow polygons to be filled and will allow the use of layer names containing symbols normally prohibited within DXF layer names such as "<>+/-/\".

Georeferenced JPEG images

Image files are imported according to the standard geo-referencing information commonly found in the .jgw file. For example a typical jgw would contain

```

2
0
0
-2
326350.45488161654
6909799.4953348311

```

The first and fourth lines provide the x pixel size, and y pixel size while the last two lines give the easting and northing of the top left corner of the image. Currently only metric values for the coordinates can be used and images must be aligned to the easting and northing directions. (ie the second and third lines must be zero)

Information relating to overlay imports are given in the blue box and summarised below:

DXF and XOL–

- DXF and XOL files define a number of layers containing lines, polygons, circles and text.
- XOL files allow polygons to be filled and will allow the use of layer names containing symbols.

Georeferenced JPEG images –

- Image files are imported according to the georeference information found in a matched .jgw file.

4. Tick the layers that will be shown on the site map and select **Process**.

ORICA Home Site My Account Sign-out

Overview Site Map Blasts Performance Documents Images Videos Site admin

Pending overlay layer import request for site [Demonstration Mine 1]

Please select layers from file "CB_EXTENTS.xol" to be added to the site map or their contents updated.

Process	Action	Layer name	Items	Confidential
<input type="checkbox"/>	New	CB_EXTENTS	630	<input type="checkbox"/>

There are currently 0 layers defined as map overlays and at most only 8 overlays can be used

Process Abort

Processing overlays

This form setups up the background job to import graphical data onto the site map. The site map may contain a number of overlay layers up to the maximum configured limit. Layers may contain either vector graphics comprising lines, polygons, circles and text, or a geo-referenced jpeg image.

Importing a .dxf or SHOTPlus 5 .xol file allows multiple layers to be defined at once while image files define a single layer.

Imported layers either replace the contents of existing layers with the same names or creates additional layers with the imported layer names. The layer names can be subsequently edited using the "edit site overlay layers" link on the next page. Layers may be marked confidential and will not be visible to non-Orica users.

DXF and XOL vector graphics

DXF and XOL files defined a number of layers containing lines, polygons, circles, and text. These coordinates should be defined in metres. XOL files allow polygons to be filled and will allow the use of layer names containing symbols normally prohibited within DXF layer names such as "<>+/-/\".

Georeferenced JPEG images

Image files are imported according to the standard geo-referencing information commonly found in the .jgw file. For example a typical jgw would contain

```

2
0
0
-2
326350.45488161654
6989799.4953348311

```

The first and fourth lines provide the x pixel size, and y pixel size while the last two lines give the easting and northing of the top left corner of the image. Currently only metric values for the coordinates can be used and images must be aligned to the easting and northing directions. (ie the second and third lines must be zero)

The information will then be displayed under **Map layers**. To edit site overlays select **Edit site overlay layers**.

ORICA Home Site My Account Sign-out

Overview Site Map Blasts Performance Documents Images Videos Site admin

Demonstration Mine 1 General Site members Job pack definition Map configuration LoadPlus RockFrag EPaper

Site Demonstration Mine 1 View site map

Site mapping

NCVIB Project Id

Coordinate system
MGA Zone 50/GDA94 Suitable for 114°E to 120°E.
Altitude at zero elevation 0.0 m

Map centred at (latitude,longitude)
Not defined

Use white background

[Edit](#)

[Upload DXF, coordinated JPEG image or SP5 overlay \(.xol\)](#)

[Execute a re-mapping job](#)

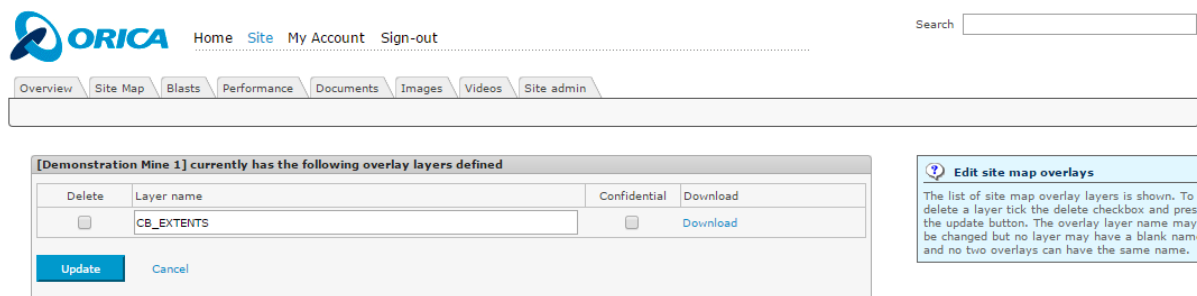
[Edit site overlay layers](#)

[Go to site map](#)

Map layers

Group	Layer	Source of data
Site map		
		CB_EXTENTS
		An overlay layer produced in SP5 or from a DXF and uploaded to BLIS
Blasts		
	Blast centre	Shows a marker corresponding to the centre of each blast
	Blast bounds	Shows a polygon marking the boundary of each blast
	Excavator E05 Dig Rate	Visualises the values of the 'Excavator E05 Dig Rate' measure as a marker for each blast
	PPV Exceedance	Visualises the values of the 'Max PPV' measure as a marker for each blast
	Airblast Exceedance	Visualises the values of the 'Max Airblast' measure as a marker for each blast
	Filter by Blast Type	Filters the display of blast markers which match values of the 'Blast Type' descriptor

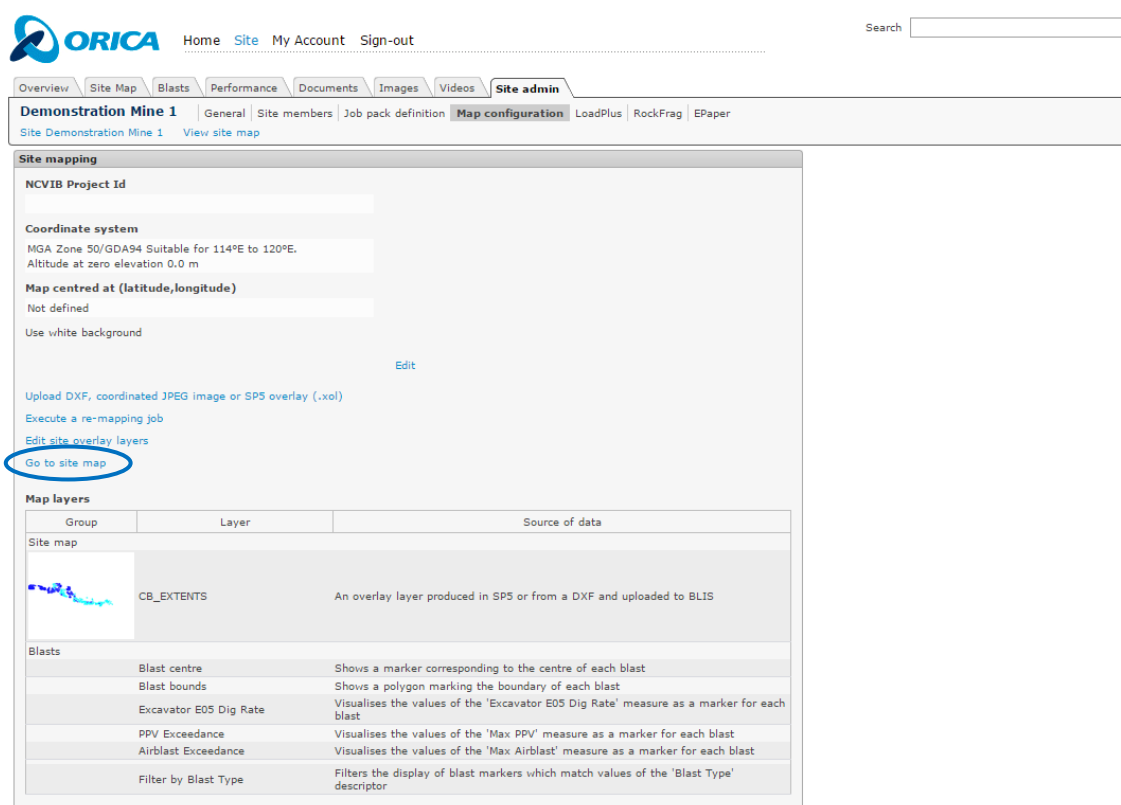
From the edit screen, delete or download a copy of the layer, or make the layer confidential. Select **Update** to save changes.



7.4.3 Select a Default Site Map View

The following describes how to setup a default map view that will be shown whenever any user views the **Site map**.

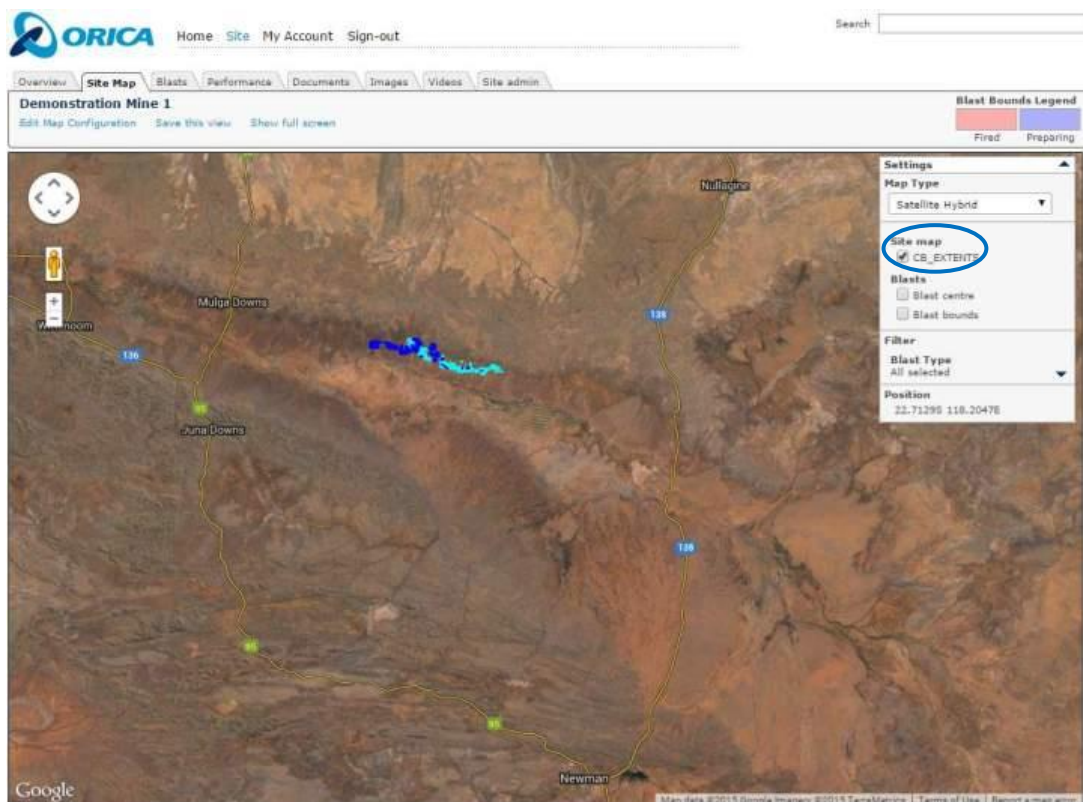
1. Under **Map configuration** select **Go to site map**.



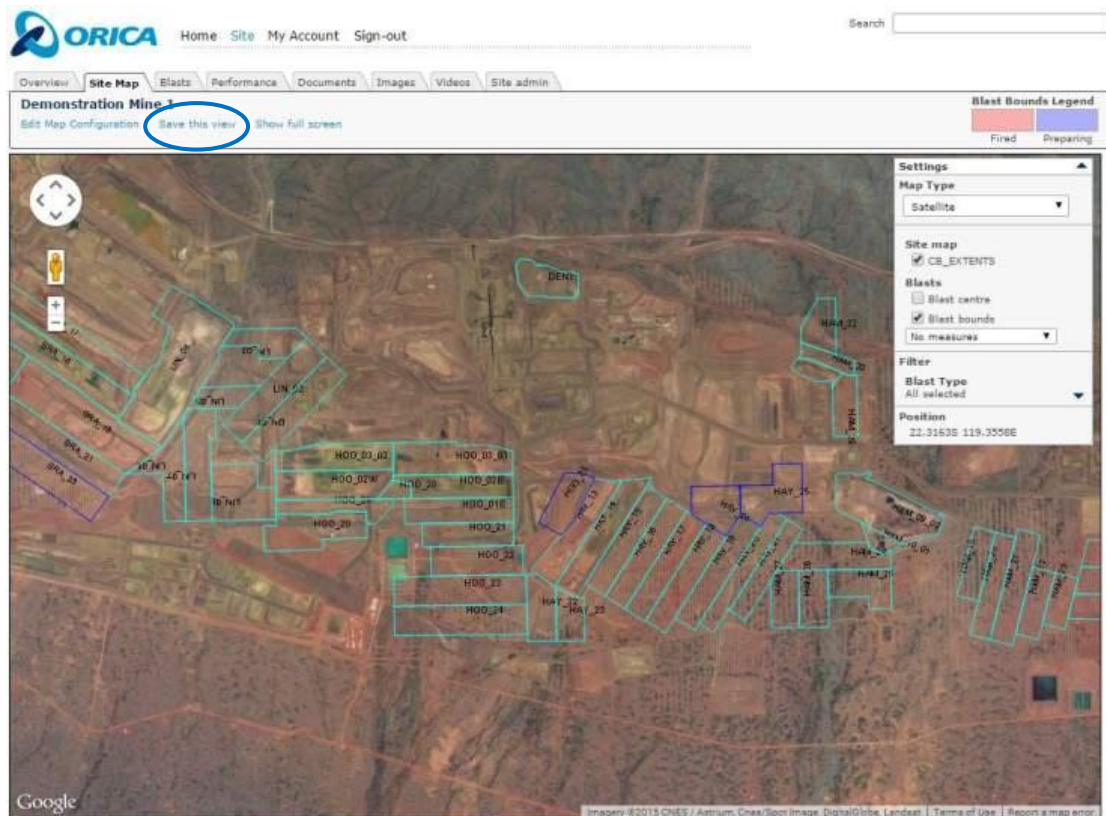
2. Use the map's zoom and pan functions to find the site.



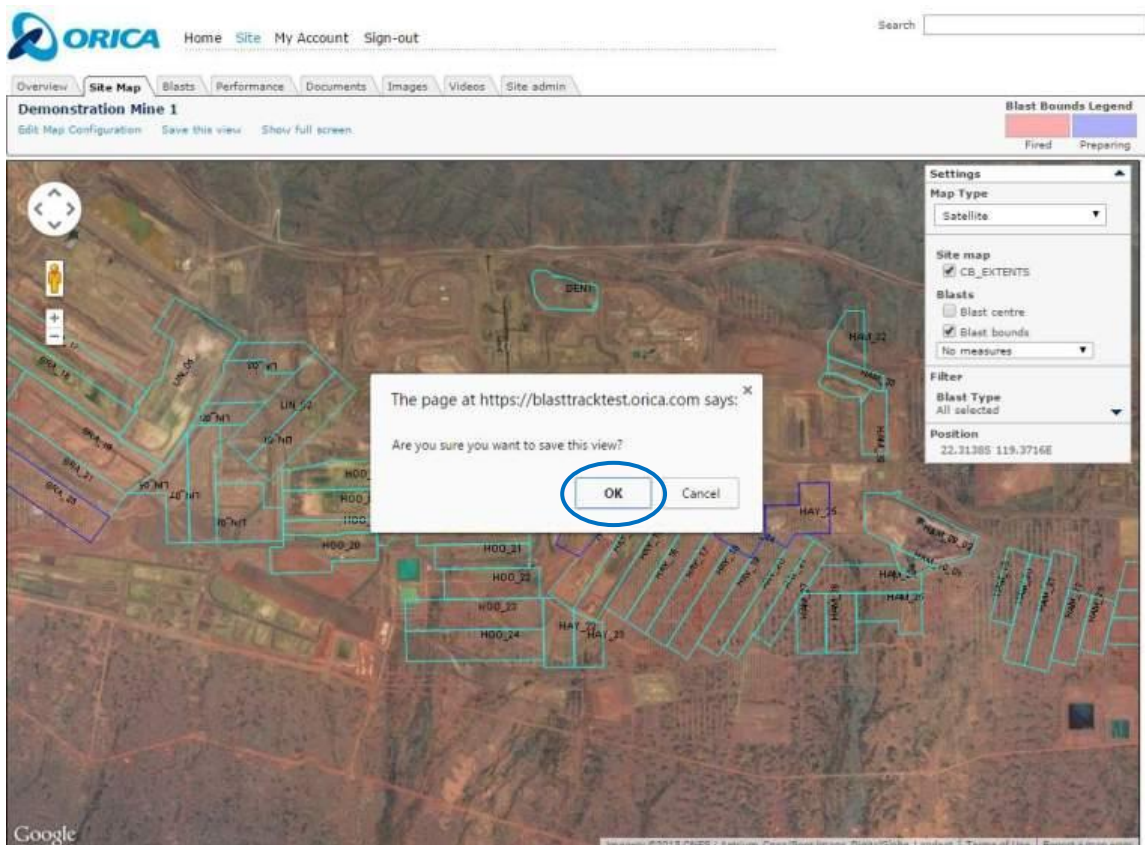
3. Turning on the DXF layers may assist in finding the location of the site.



4. Once the map is at an appropriate zoom and area of the map, select **Save this view**.



5. Select **OK**.

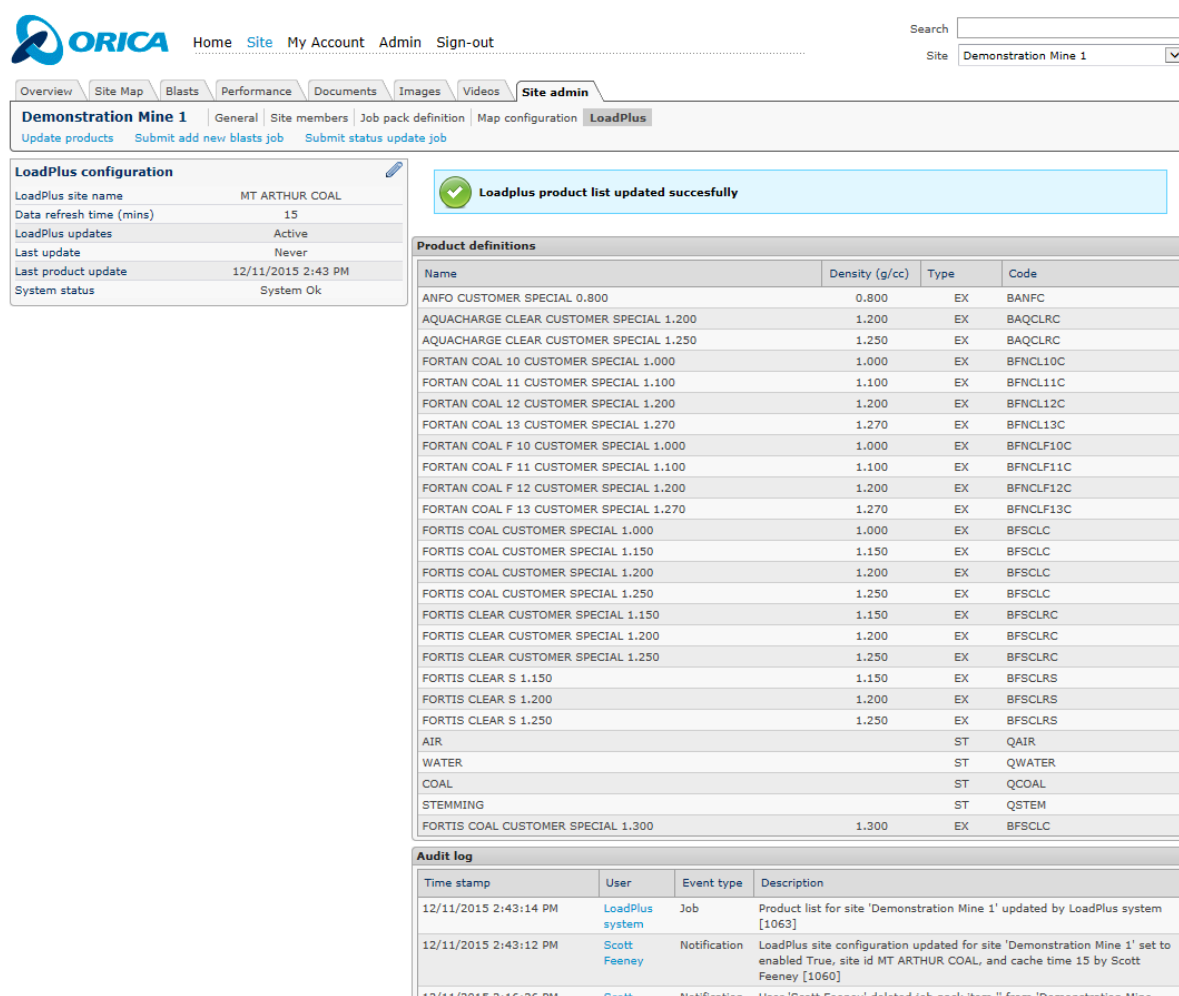


The current view and layers visible on the screen will be the default site map view for any users that visits the site on BlastIQ. This can be changed at any time to adjust the area or layers visible.

7.5 SETTING UP LOADPLUS CONNECTION

1. Contact a BlastIQ administrator to configure connection to the LOADPlus system.

Once configured, LOADPlus Connection provides the following information:



The screenshot displays the BlastIQ web application interface. At the top, the ORICA logo is on the left, and navigation links (Home, Site, My Account, Admin, Sign-out) are in the center. A search bar and a site dropdown menu (set to 'Demonstration Mine 1') are on the right. Below the navigation bar, a series of tabs includes Overview, Site Map, Blasts, Performance, Documents, Images, Videos, and Site admin (which is active). Under the Site admin tab, there are sub-tabs: General, Site members, Job pack definition, Map configuration, and LoadPlus (which is selected). The LoadPlus configuration page shows a 'LoadPlus configuration' table on the left with details for 'MT ARTHUR COAL', including data refresh time (15 mins), update status (Active), and system status (System Ok). A green success message states 'Loadplus product list updated successfully'. The main area contains a 'Product definitions' table listing various customer special products with their densities, types, and codes. At the bottom, an 'Audit log' table records recent system updates and user actions.

LoadPlus site name	MT ARTHUR COAL
Data refresh time (mins)	15
LoadPlus updates	Active
Last update	Never
Last product update	12/11/2015 2:43 PM
System status	System Ok

Name	Density (g/cc)	Type	Code
ANFO CUSTOMER SPECIAL 0.800	0.800	EX	BANFC
AQUACHARGE CLEAR CUSTOMER SPECIAL 1.200	1.200	EX	BAQCLRC
AQUACHARGE CLEAR CUSTOMER SPECIAL 1.250	1.250	EX	BAQCLRC
FORTAN COAL 10 CUSTOMER SPECIAL 1.000	1.000	EX	BFNCL10C
FORTAN COAL 11 CUSTOMER SPECIAL 1.100	1.100	EX	BFNCL11C
FORTAN COAL 12 CUSTOMER SPECIAL 1.200	1.200	EX	BFNCL12C
FORTAN COAL 13 CUSTOMER SPECIAL 1.270	1.270	EX	BFNCL13C
FORTAN COAL F 10 CUSTOMER SPECIAL 1.000	1.000	EX	BFNCLF10C
FORTAN COAL F 11 CUSTOMER SPECIAL 1.100	1.100	EX	BFNCLF11C
FORTAN COAL F 12 CUSTOMER SPECIAL 1.200	1.200	EX	BFNCLF12C
FORTAN COAL F 13 CUSTOMER SPECIAL 1.270	1.270	EX	BFNCLF13C
FORTIS COAL CUSTOMER SPECIAL 1.000	1.000	EX	BFSCLC
FORTIS COAL CUSTOMER SPECIAL 1.150	1.150	EX	BFSCLC
FORTIS COAL CUSTOMER SPECIAL 1.200	1.200	EX	BFSCLC
FORTIS COAL CUSTOMER SPECIAL 1.250	1.250	EX	BFSCLC
FORTIS CLEAR CUSTOMER SPECIAL 1.150	1.150	EX	BFSCLCRC
FORTIS CLEAR CUSTOMER SPECIAL 1.200	1.200	EX	BFSCLCRC
FORTIS CLEAR CUSTOMER SPECIAL 1.250	1.250	EX	BFSCLCRC
FORTIS CLEAR S 1.150	1.150	EX	BFSCLCRS
FORTIS CLEAR S 1.200	1.200	EX	BFSCLCRS
FORTIS CLEAR S 1.250	1.250	EX	BFSCLCRS
AIR		ST	QAIR
WATER		ST	QWATER
COAL		ST	QCOAL
STEMMING		ST	QSTEM
FORTIS COAL CUSTOMER SPECIAL 1.300	1.300	EX	BFSCLC

Time stamp	User	Event type	Description
12/11/2015 2:43:14 PM	LoadPlus system	Job	Product list for site 'Demonstration Mine 1' updated by LoadPlus system [1063]
12/11/2015 2:43:12 PM	Scott Feeney	Notification	LoadPlus site configuration updated for site 'Demonstration Mine 1' set to enabled True, site id MT ARTHUR COAL, and cache time 15 by Scott Feeney [1060]
12/11/2015 2:16:36 PM	Scott	Notification	User 'Scott Feeney' deleted job pack item " " from 'Demonstration Mine 1'

It will display:

- The **LOADPlus site name**
- The **Data refresh time** in minutes
Note: all LOADPlus sites are currently updated every 15 minutes
- **LOADPlus updates** (Active / Inactive)
- **Last update:** date and timestamp of last LOADPlus data update for this site
- **Last product update:** date and timestamp of last products list update for this site
- **System status**

LoadPlus configuration	
LoadPlus site name	
Data refresh time (mins)	15
LoadPlus updates	Active
Last update	Never
Last product update	12/11/2015 2:43 PM
System status	System Ok

The **Products definitions** area of the webpage shows a list of the products for use on that site. The fields listed are:

- **Name**
- **Density**
- **Type**
- **SAP Code**

Product definitions			
Name	Density (g/cc)	Type	Code
ANFO CUSTOMER SPECIAL 0.800	0.800	EX	BANFC
AQUACHARGE CLEAR CUSTOMER SPECIAL 1.200	1.200	EX	BAQCLRC
AQUACHARGE CLEAR CUSTOMER SPECIAL 1.250	1.250	EX	BAQCLRC
FORTAN COAL 10 CUSTOMER SPECIAL 1.000	1.000	EX	BFNCL10C
FORTAN COAL 11 CUSTOMER SPECIAL 1.100	1.100	EX	BFNCL11C
FORTAN COAL 12 CUSTOMER SPECIAL 1.200	1.200	EX	BFNCL12C
FORTAN COAL 13 CUSTOMER SPECIAL 1.270	1.270	EX	BFNCL13C
FORTAN COAL F 10 CUSTOMER SPECIAL 1.000	1.000	EX	BFNCLF10C
FORTAN COAL F 11 CUSTOMER SPECIAL 1.100	1.100	EX	BFNCLF11C

7.6 ADDING NEWS ARTICLES TO SITE PAGE

The following describes how to add news articles to the site overview page.

1. Select the edit icon under the **News** heading on the site overview page.

The screenshot shows the Orica BlastIQ interface for 'Demonstration Mine 1'. The 'News' section is highlighted with a blue circle around the edit icon. The interface includes a top navigation bar with 'Home', 'Site', 'My Account', and 'Sign-out'. A search bar and a dropdown menu for 'Site' (set to 'Demonstration Mine 1') are also present. The main content area is divided into several sections: 'Actions menu' (Create blast, View points of interest, Upload Document, Perform vibration modeling), 'News' (no news to display), 'Site user access' (Rachel Purdie), 'File transfer folder' (No recent uploads), 'Blasting Timeline' (a calendar view), 'Monitoring points (POI)' (Environmental 01), 'Open Blasts' (No open blasts), 'Blasting descriptors implemented' (Blast Type), 'Blasting measures implemented' (Excavator E05 Dig Rate), and 'Recent Activity' (log of recent changes).

2. Select **Create new item** to post a news article on the site overview page.

The screenshot shows the 'News Editor for Demonstration Mine 1 site' page. The 'Create new item' link is circled in blue. The page has a top navigation bar with 'Home', 'Site', 'My Account', and 'Sign-out'. Below the navigation bar, there are links for 'Home page', 'Return to site', and 'Create new item'. The main content area is a table with columns: 'Headline', 'Show on or after', 'Expires after', 'Status', 'Page type', and 'Actions'. The table is currently empty, displaying 'No data to display'.

3. The news article can be configured to appear after a certain date and expire after a certain date. It may also be set as a draft, meaning it will not be displayed to users until the **Draft** box is unticked. Select **Update** after details are entered.

The screenshot shows the 'Edit news item' dialog box. The 'Headline' field contains 'BATBear Visits Site'. The 'Text' field contains 'BATBear will be visiting the site on 28/09/2017. We must prepare for the bear.' The 'Show on or after' date is set to 'Monday, 13 November 2017'. The 'Expires after' date is set to 'Wednesday, 29 November 2017'. The 'Draft' checkbox is checked. The 'Update' button is circled in blue.

4. News articles can be removed or edited at any time.

 [Home](#) [Site](#) [My Account](#) [Sign-out](#) Search

News Editor for Demonstration Mine 1 site
[Home page](#) [Return to site](#) [Create new item](#)

Headline	Show on or after	Expires after	Status	Page type	Actions
BATBear Visits Site	13/11/2017	29/11/2017	Waiting	This site only	 

8 INSTALLING SHOTPLUS 5

Section Revision: 0

Revision Date: August 2015

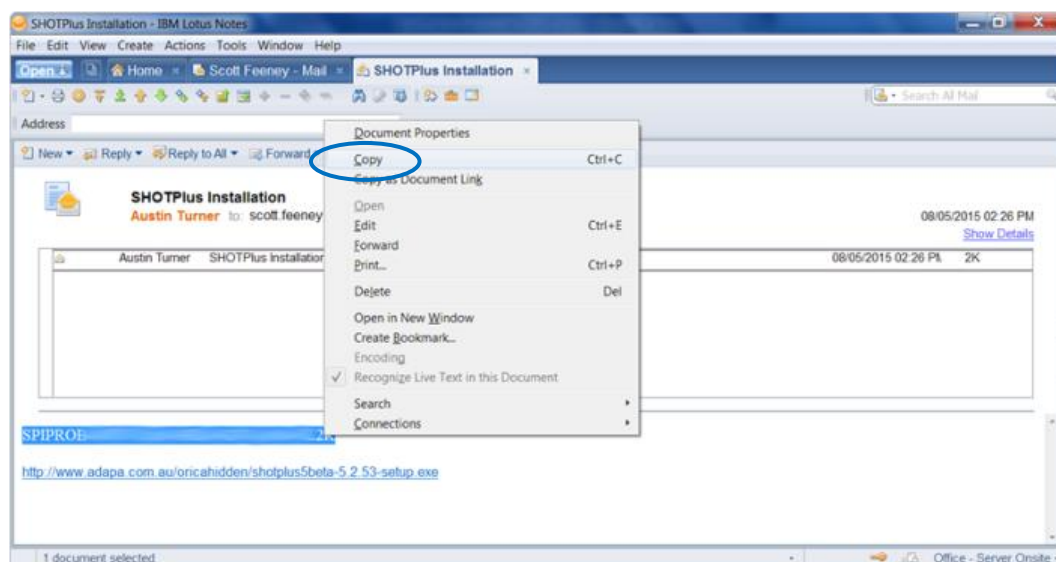
8.1 OVERVIEW

This section covers the installation process for SHOTPlus 5.

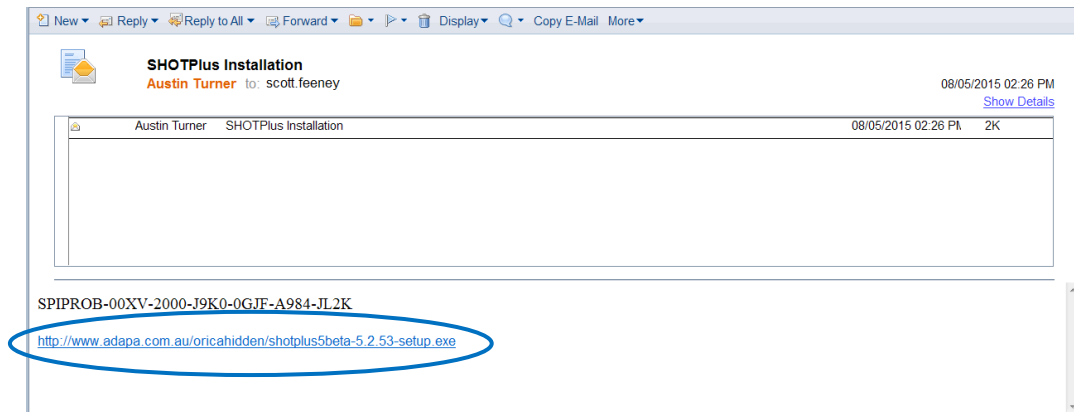
8.2 SHOTPLUS 5 LICENCE KEY

Prior to installation, external users are sent an email containing a link to download SHOTPlus 5, and their personal licence key.

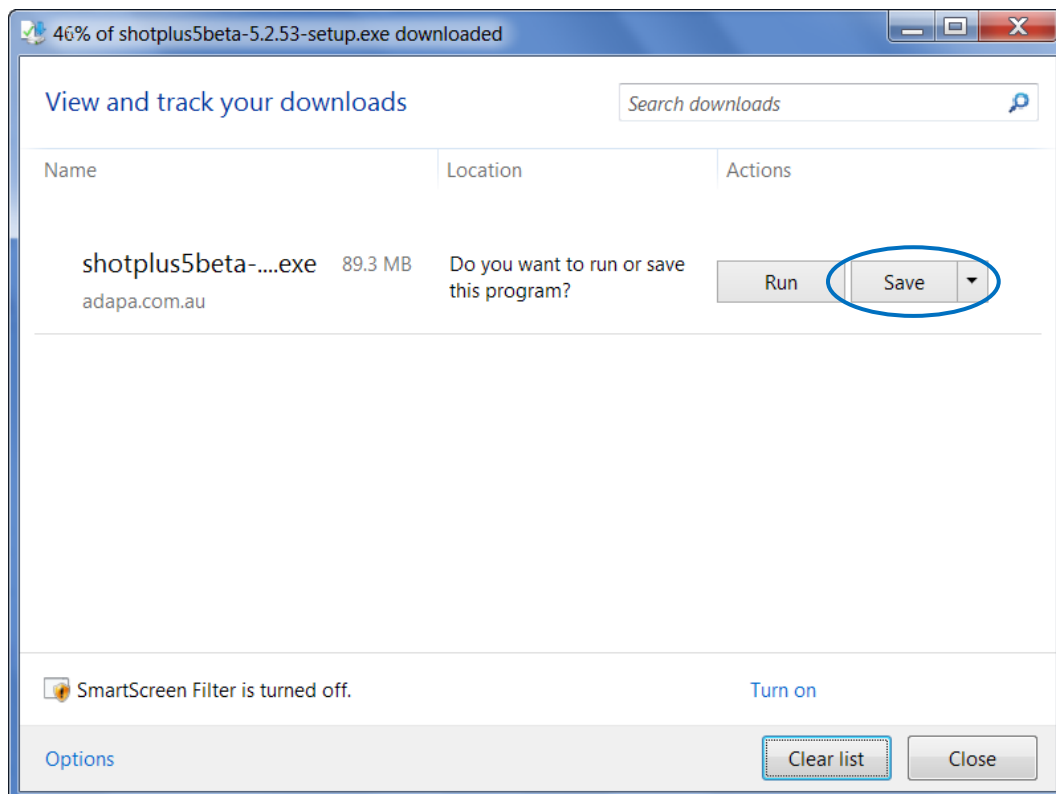
1. Copy the personal licence key to the clipboard.



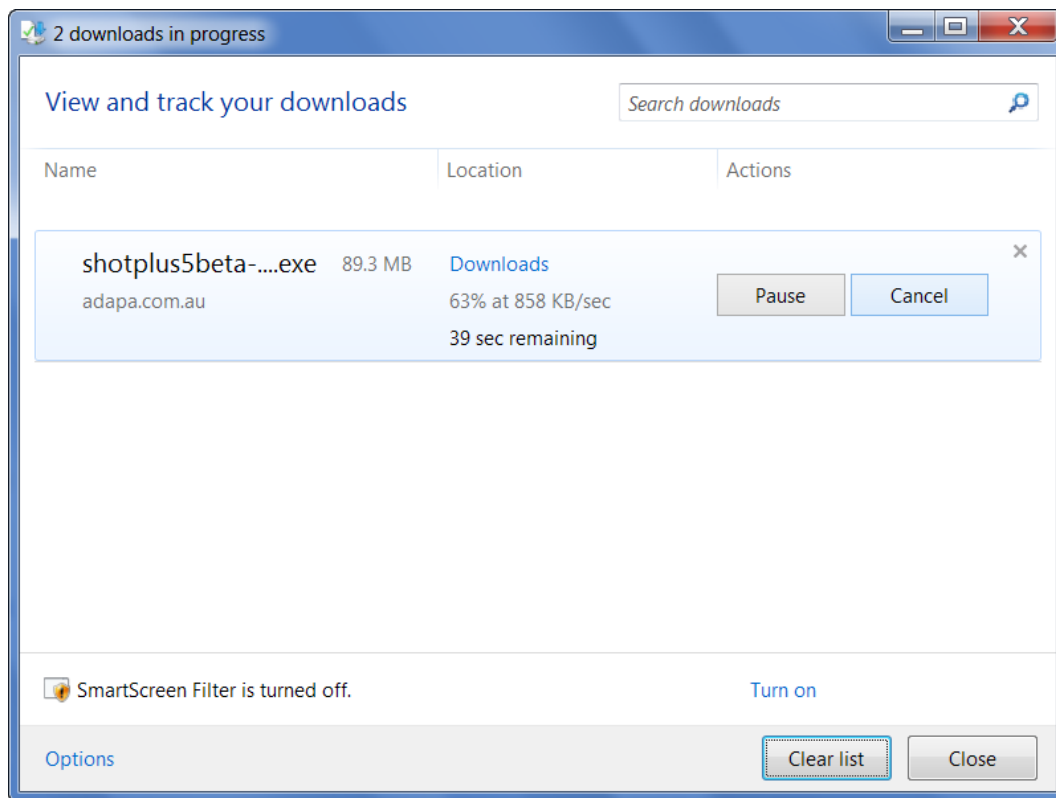
- Click on the link to begin downloading SHOTPlus 5.



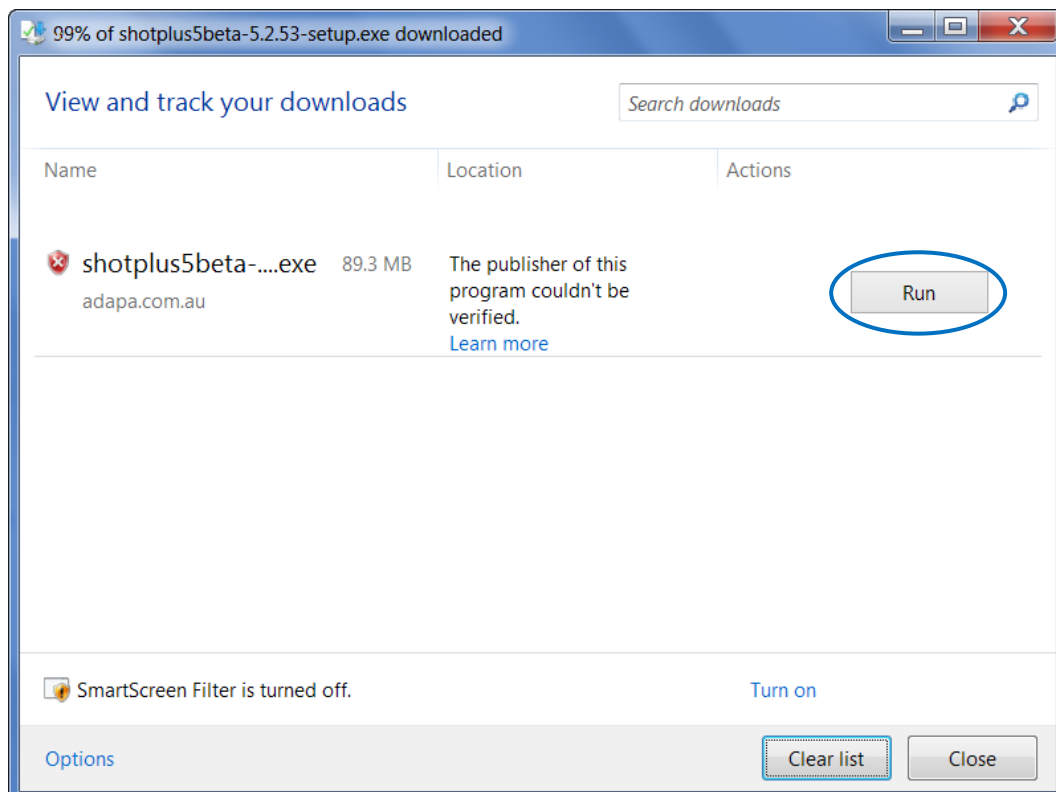
- Select **Save**.



The SHOTPlus 5 software will be downloaded to the computer.

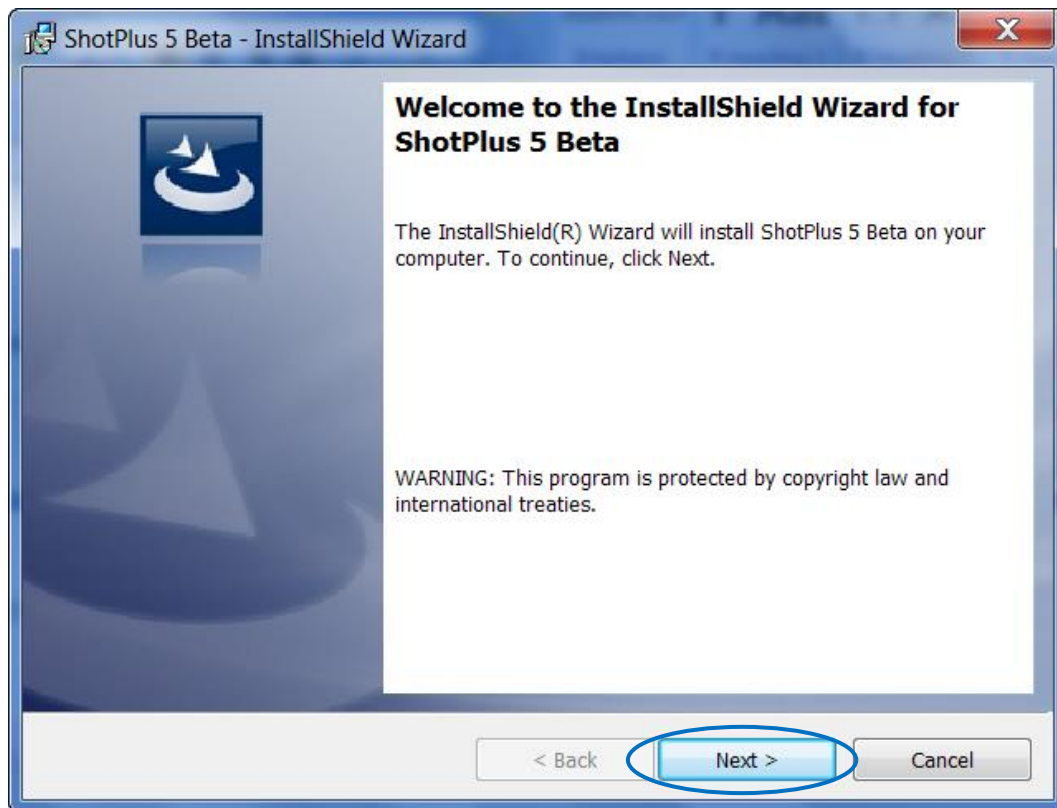


4. Select **Run**.

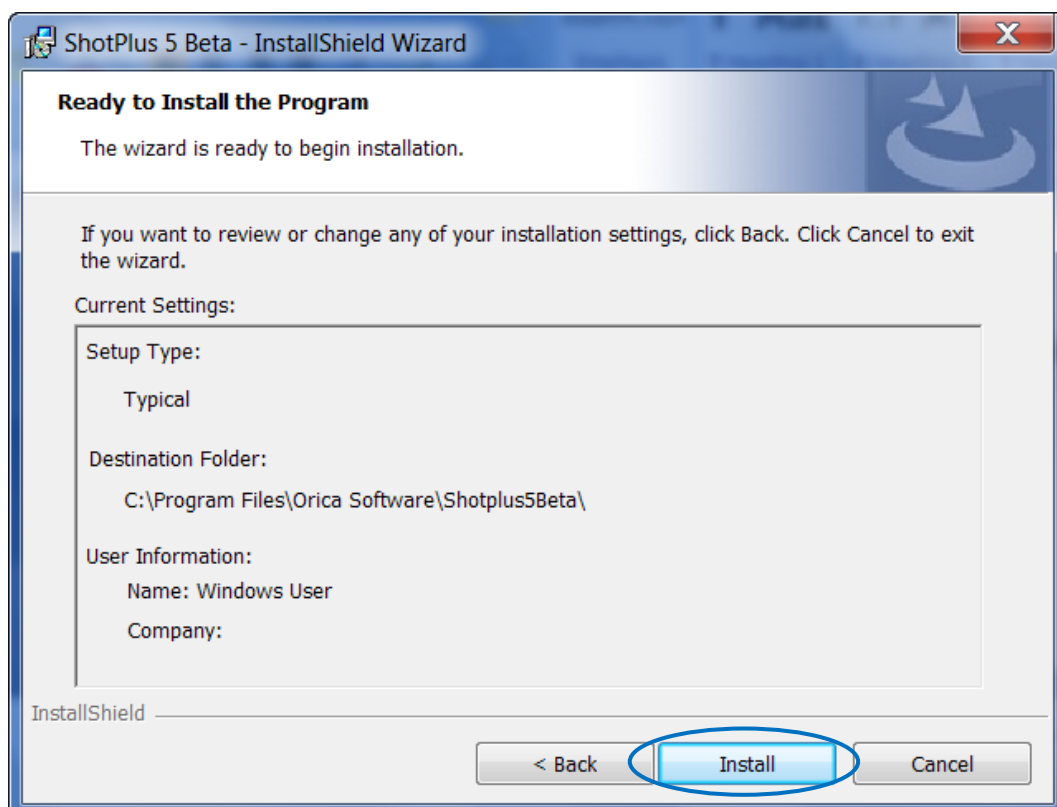


At this stage, you may be prompted with a “User Account Control” message. Select **Yes**. InstallShield Wizard starts the installation process.

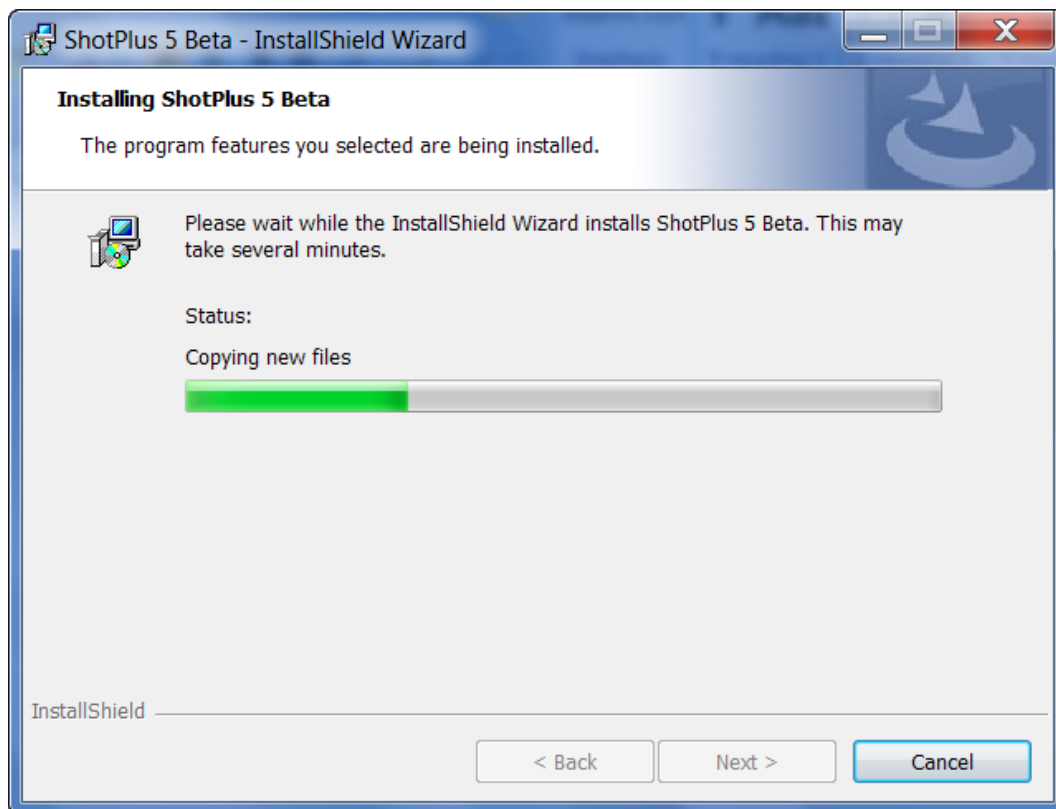
5. Select **Next**.



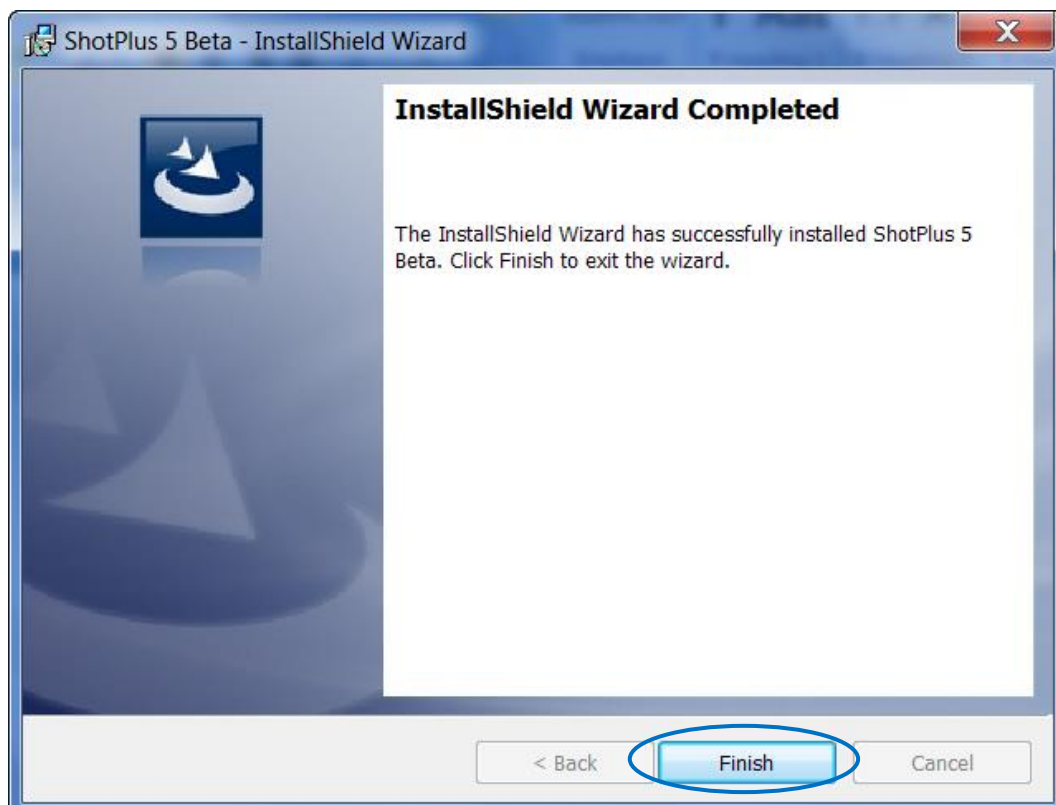
6. Select **Install**.



InstallShield Wizard continues the installation process.



7. Select **Finish**.



8.3 FIRST TIME USING SHOTPLUS 5

The first time after opening SHOTPlus 5, the user will be prompted with a language selection choice, application registration and activation entries, as well as any possible modifications required to be made to the network settings to allow successful communication and use.

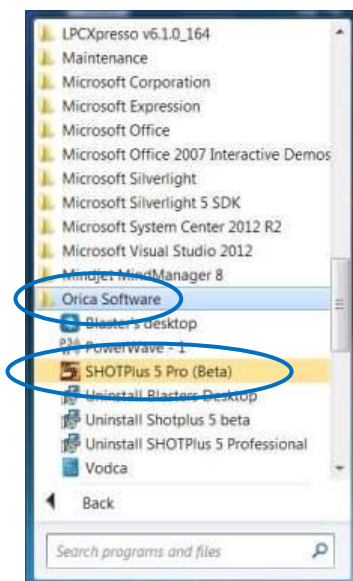
SHOTPlus 5 can be opened using the Start Menu.

1. Select **Start / SHOTPlus 5**.

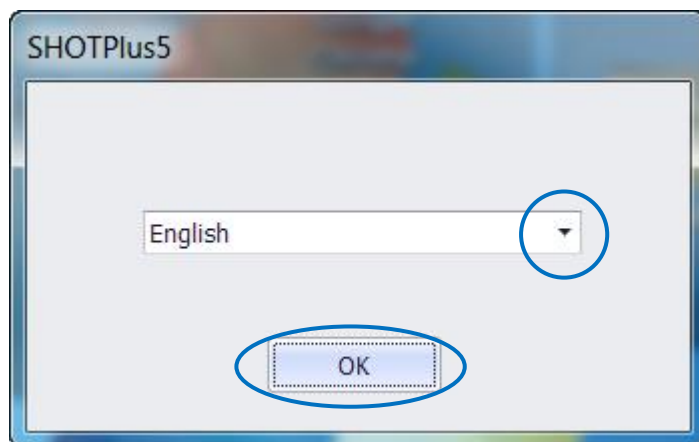


Alternatively, it may be opened using the menu tree.

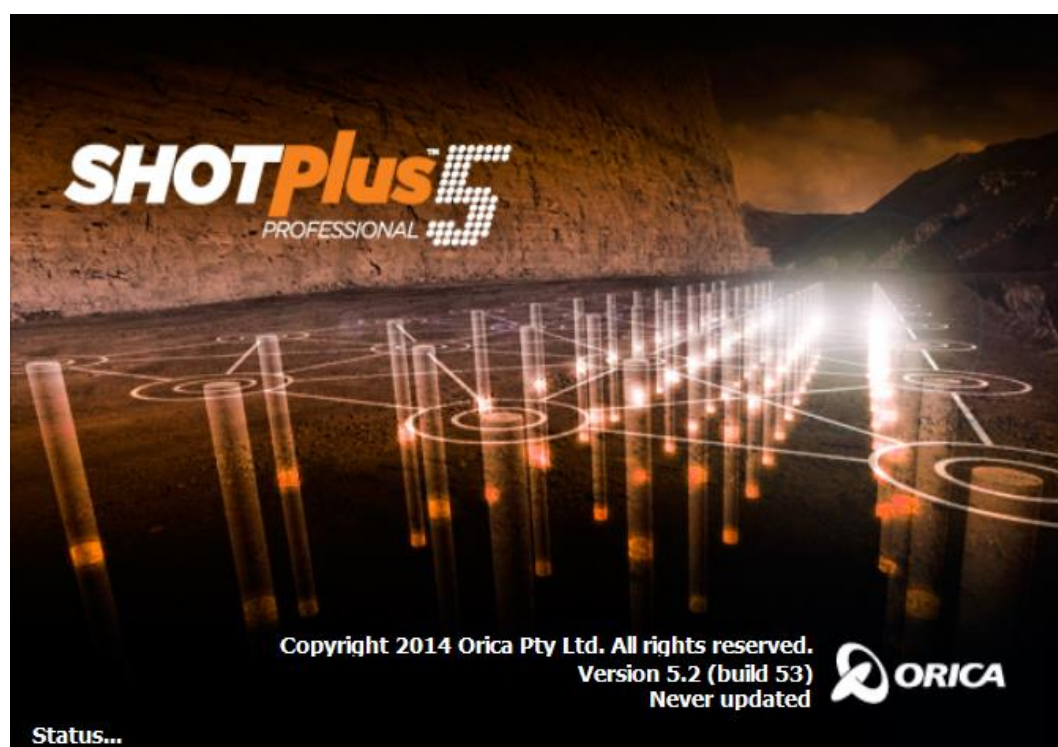
1. Select **Start / All Programs / Orica Software / SHOTPlus 5**.



2. Select required language using the drop down selector.
3. Select **OK**.

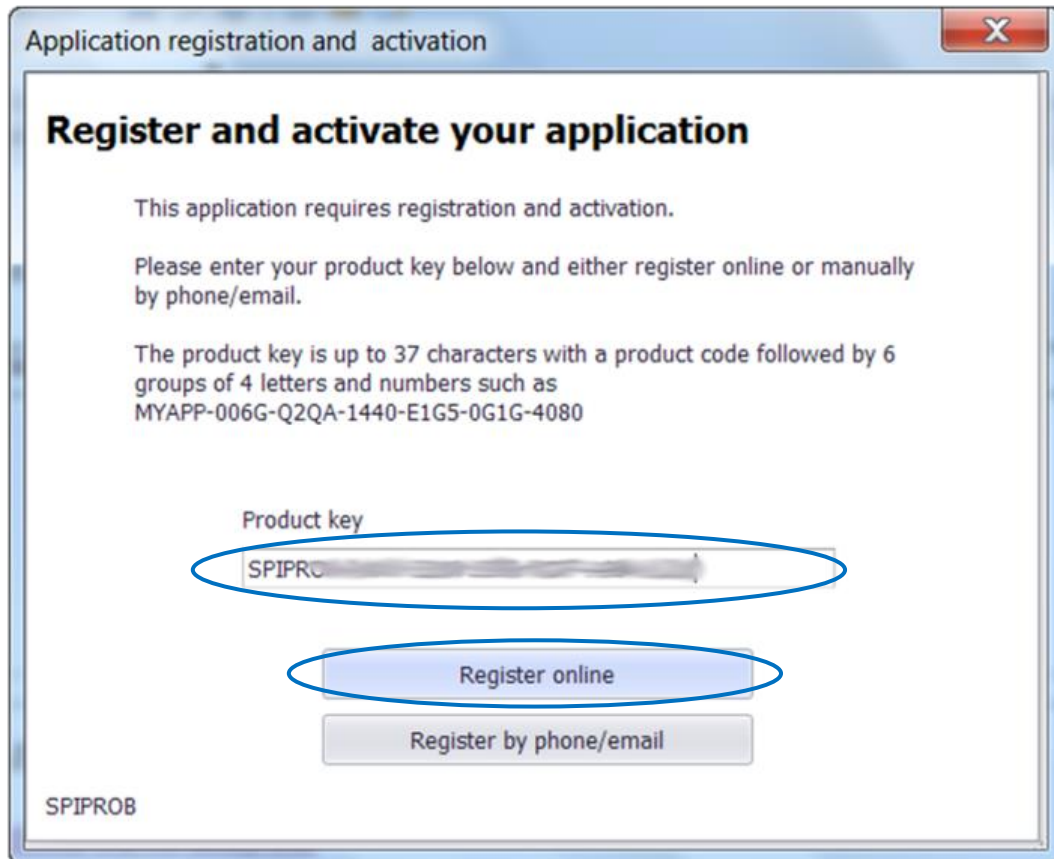


SHOTPlus 5 displays its Startup screen.



The *Application registration and activation* window is displayed.

8. Enter the personal licence key (previously copied to the clipboard) in the **Product key** field.
9. Select **Register online**.



Many companies use proxy servers, you may need to modify internet settings to be able to access and use SHOTPlus 5.

4. Select **Connection setup**.

The screenshot shows a dialog box titled "Application registration and activation" with a close button (X) in the top right corner. The main heading is "Online activation of your application". Below this, there are several input fields: "Product key" with the value "SPIPRO", "First name" with "Scott", "Last name" with "Feeney", "Email" with "scott.feeney@orica.com", "Organisation" with "Orica", and "Region" with a dropdown menu showing "AUSTRALIA". Each of these fields has a red asterisk to its right, indicating they are required. Below the input fields are two buttons: "Activate" and "Cancel". At the bottom left, there is a red asterisk followed by the text "* required value". At the bottom right, there is a button labeled "Connection setup", which is circled in blue.

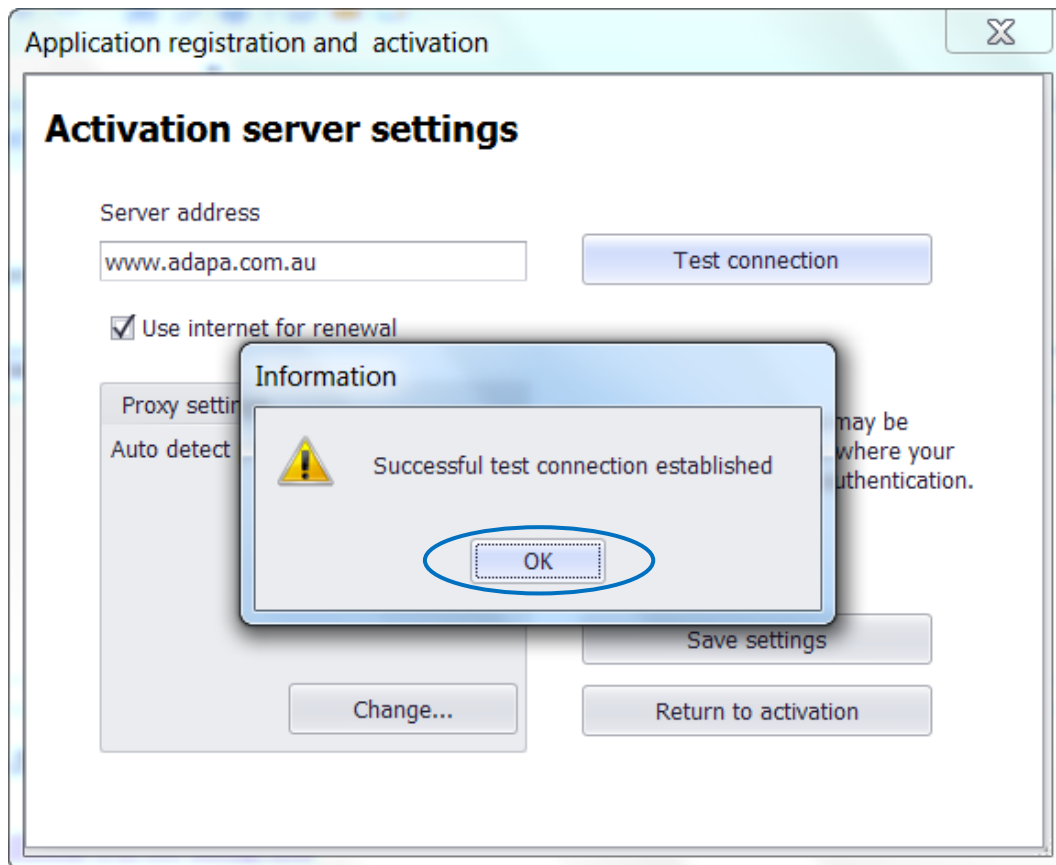
5. Select **Test connection**.

The screenshot shows the same dialog box, but with the "Activation server settings" tab selected. The "Server address" field contains "www.adapa.com.au". To the right of this field is a button labeled "Test connection", which is circled in blue. Below the "Server address" field is a checkbox labeled "Use internet for renewal" which is checked. Below this is a "Proxy settings" section with a button labeled "Change...". To the right of the proxy settings section is a text box that says "The proxy server settings may be required in circumstances where your firewall requires manual authentication." At the bottom right, there are two buttons: "Save settings" and "Return to activation".

An *Information* window containing the test result will be displayed.

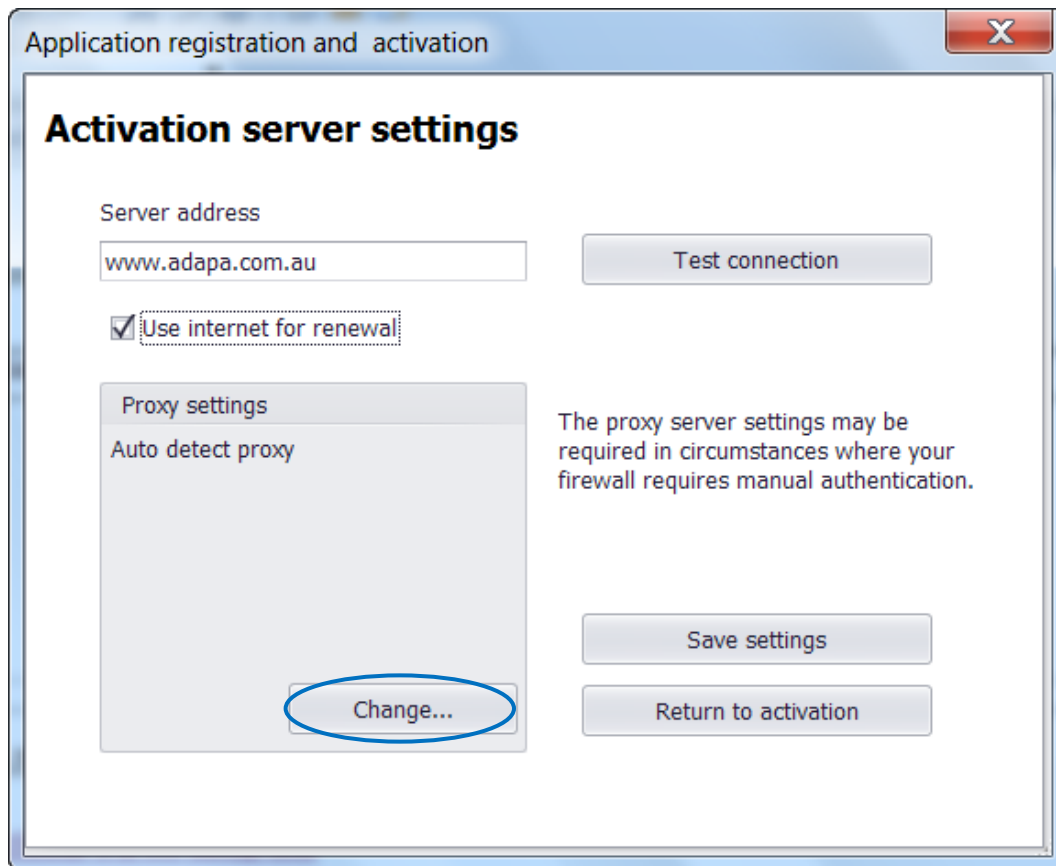
If *Successful test connection established* is shown:

6. Select **OK**.
7. Go to [Step 12](#).



If the connection test failed:

8. Select **Change**.

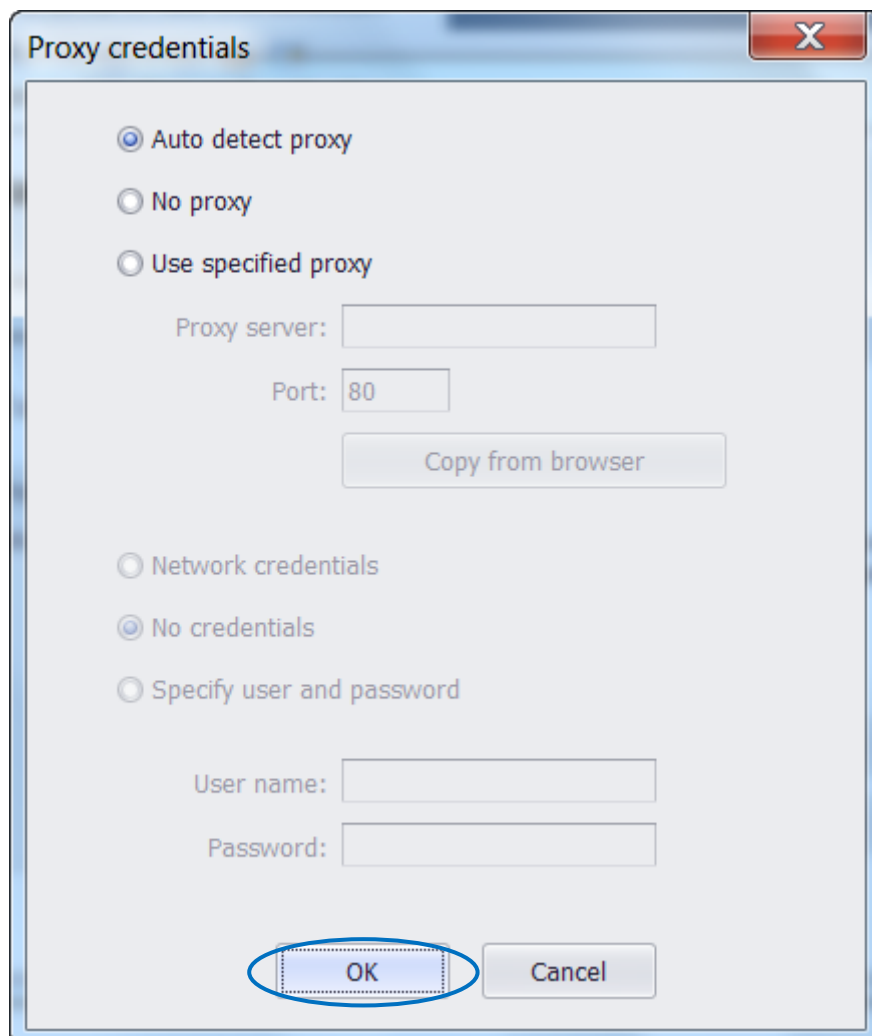


On some systems, proxy settings may require setting or modifying.

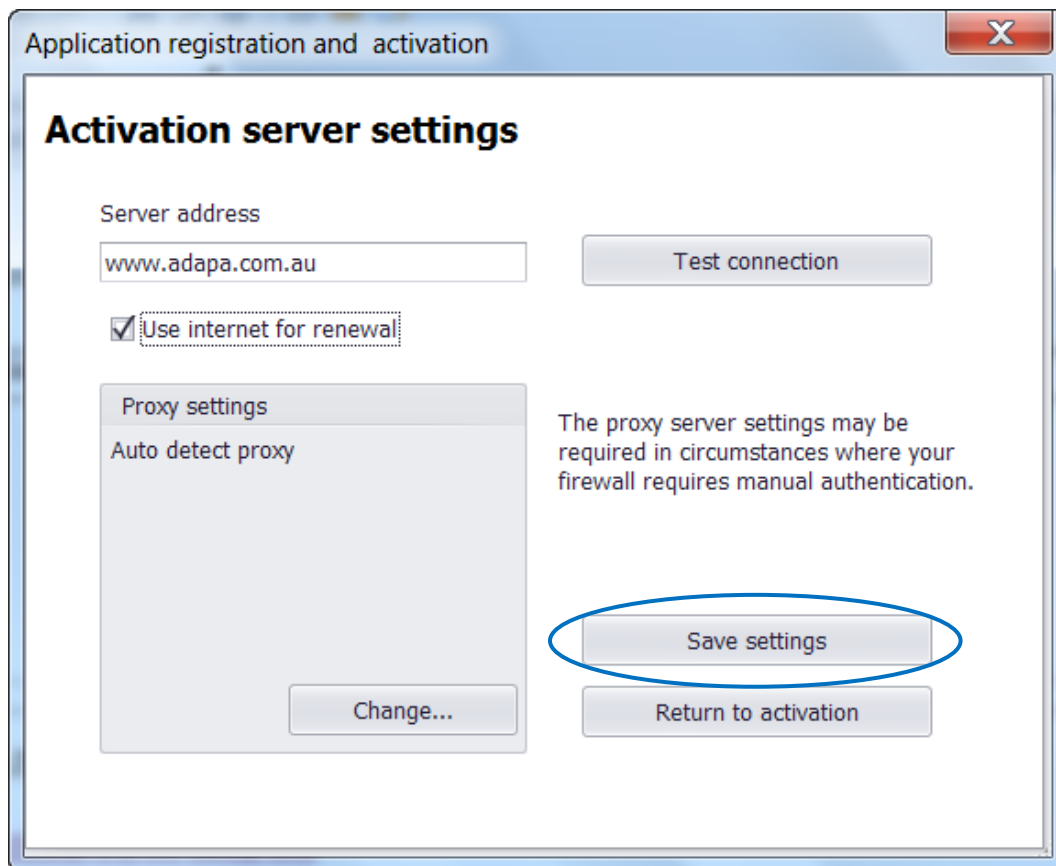
Contact your company's IT Administrator for help setting these.

Once these changes have been made:

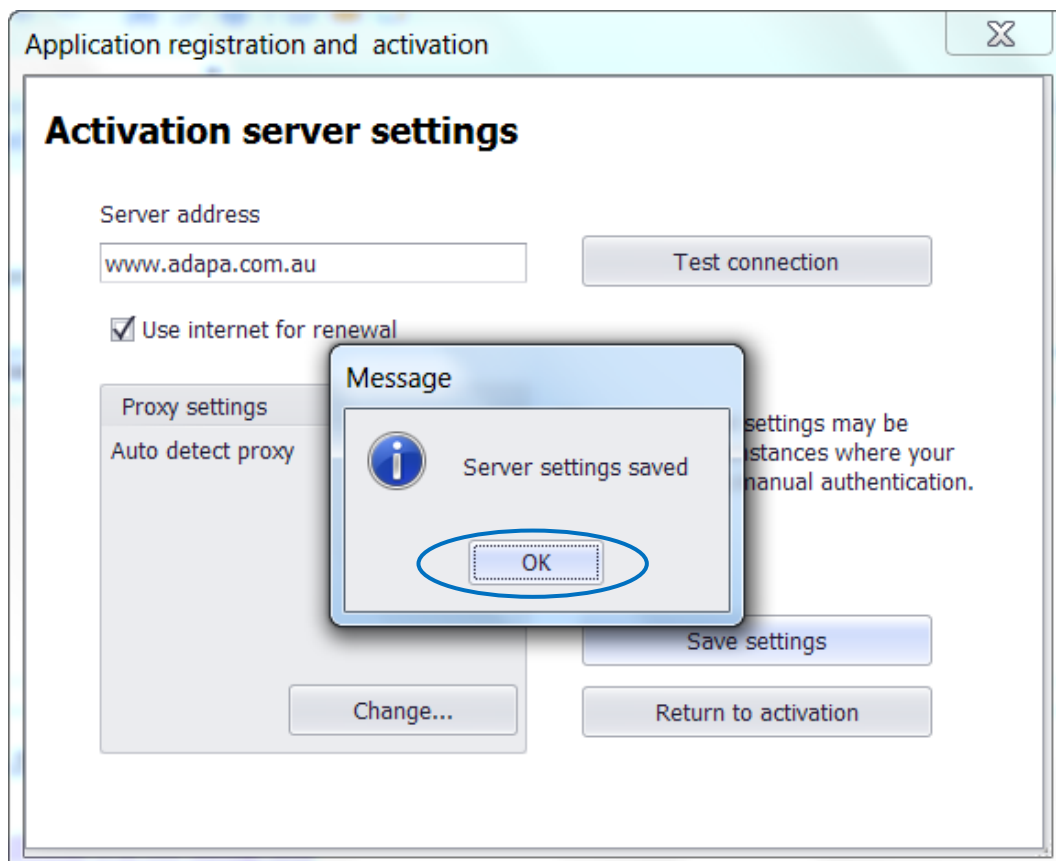
9. Select **OK**.



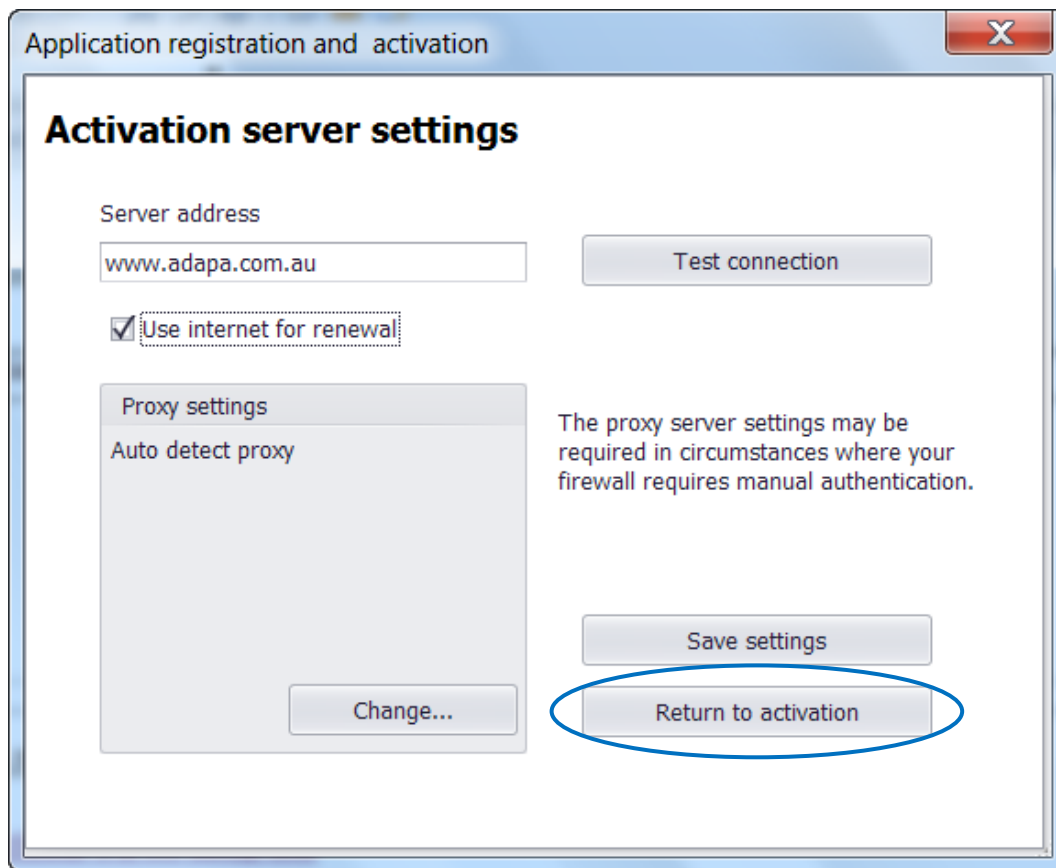
8. Select **Save settings**.



9. Select **OK**.



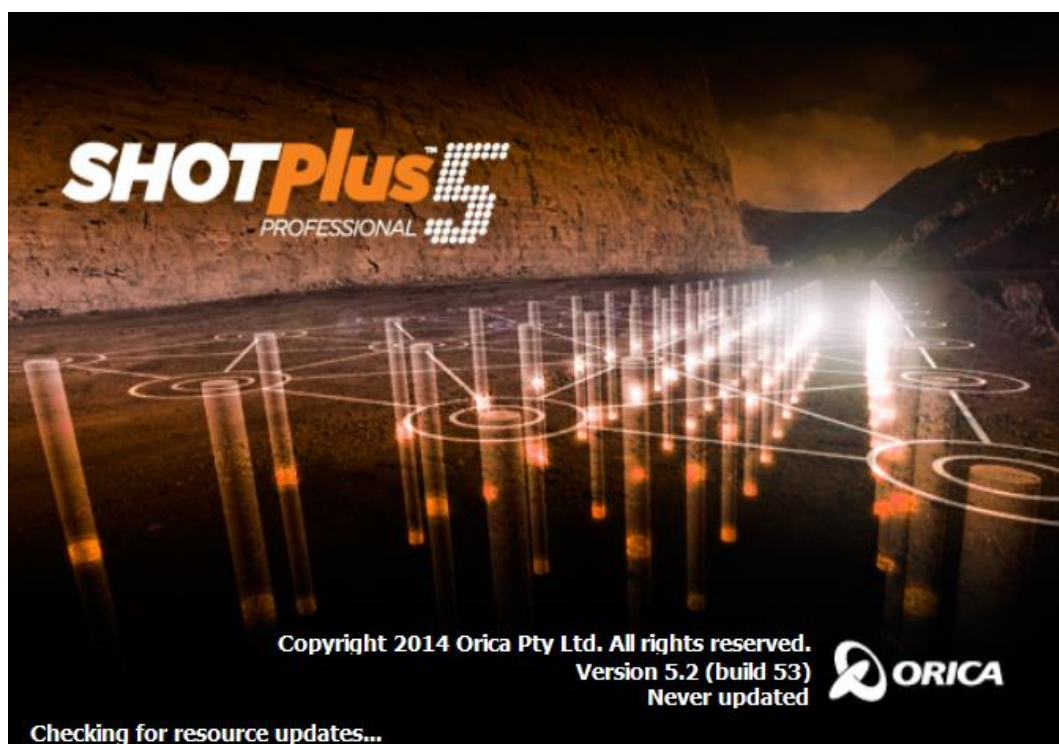
10. Select **Return to activation**.



11. Select **Register online**.

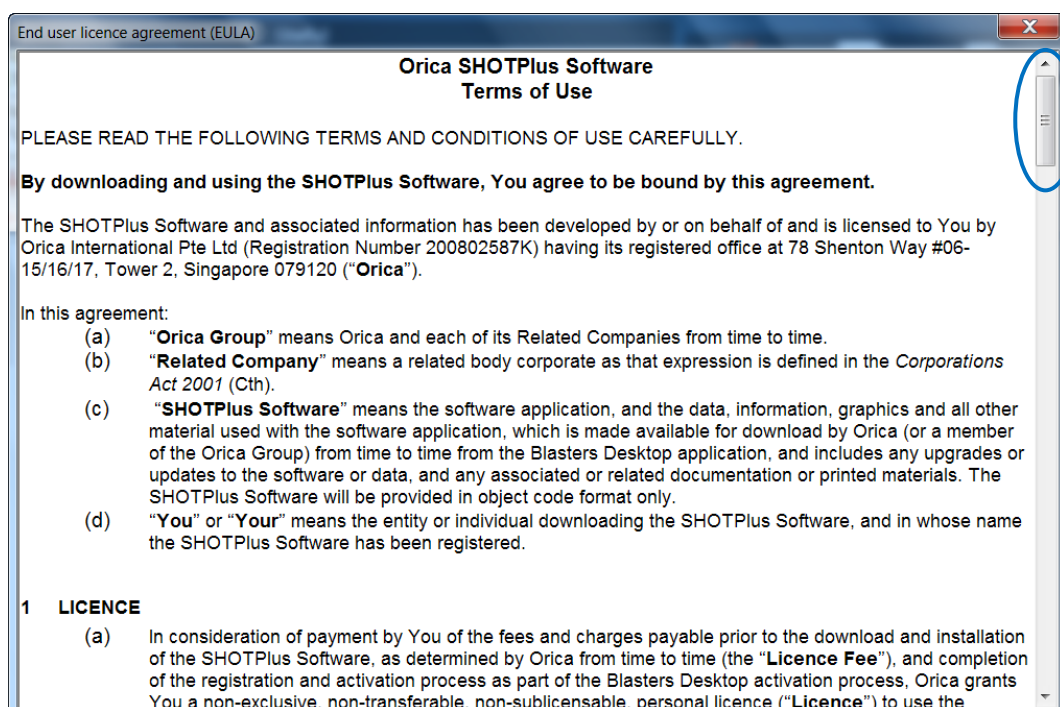


12. Select **Activate** (when prompted).
The SHOTPlus 5 Start up screen displays.



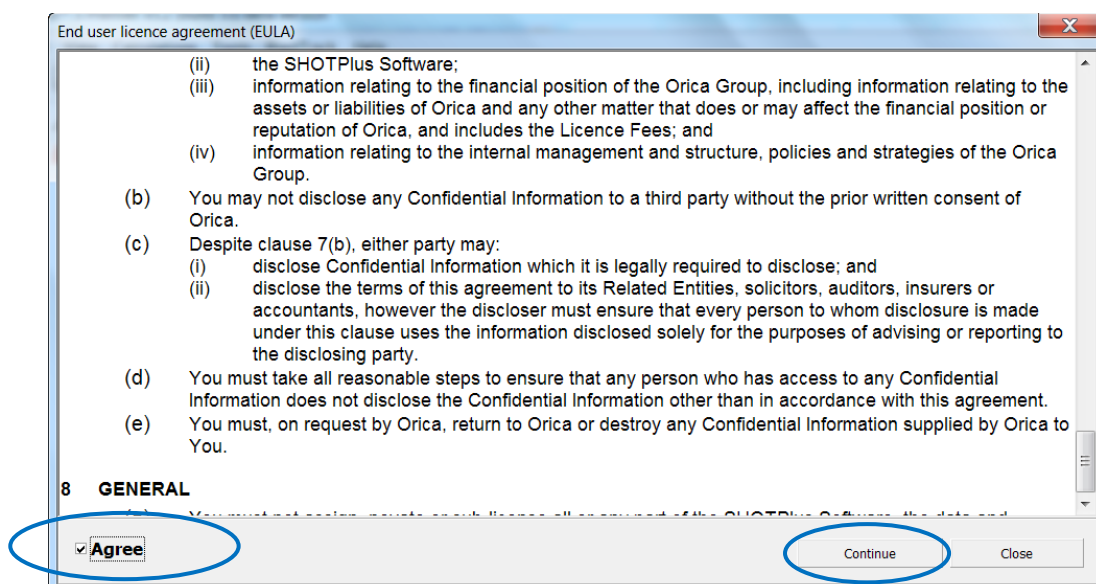
As this is the first time using the SHOTPlus software, the Orica *SHOTPlus Software Terms of Use* must be accepted.

13. Scroll to the bottom of the agreement using the scroll bar.



14. Place a tick in the **Agree** field.

15. Select **Continue**.



The SHOTPlus 5 home screen, including the Start-up Assistant, is displayed.

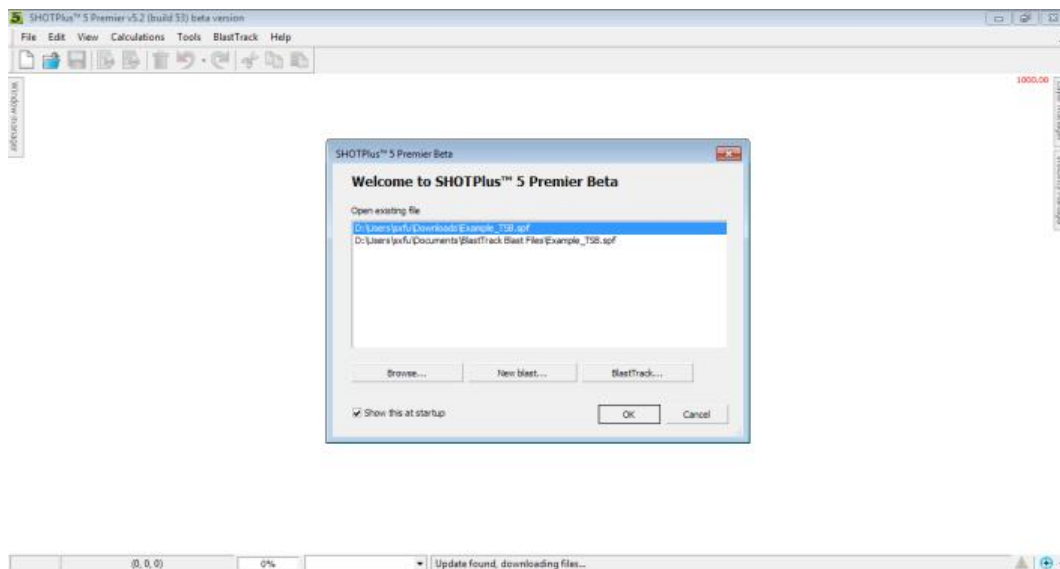
If an existing file is required:

16. Select the file by clicking it once.

17. Select **OK**.

If a new file is being created:

18. Select **Cancel**.

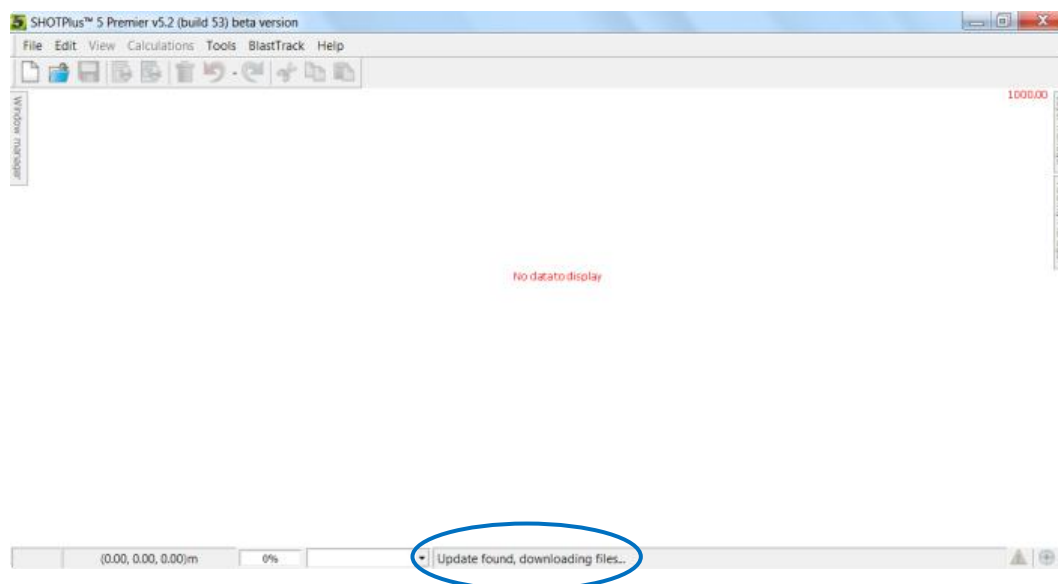


8.4 INSTALLING SHOTPLUS 5 UPDATES

To keep performing at its optimum and to incorporate new features, software is periodically updated.

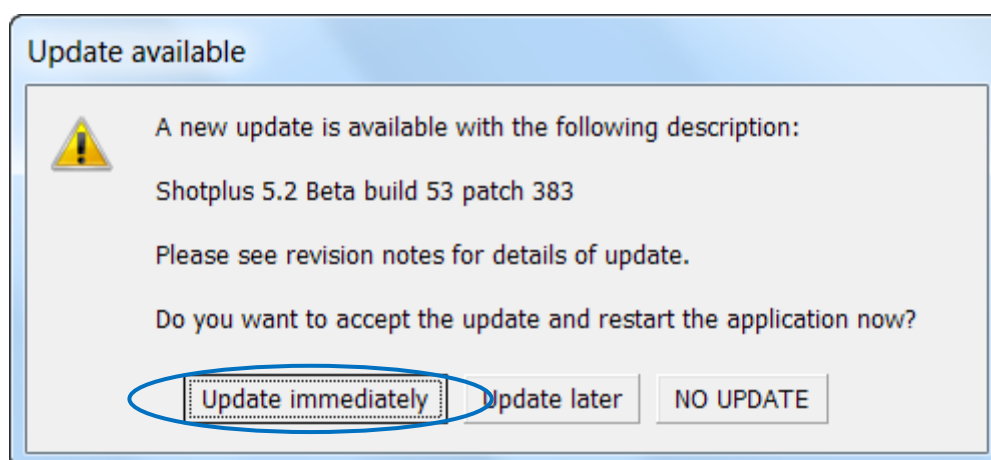
Occasionally, when opening SHOTPlus 5, you will observe the following message:

Update found, downloading files...



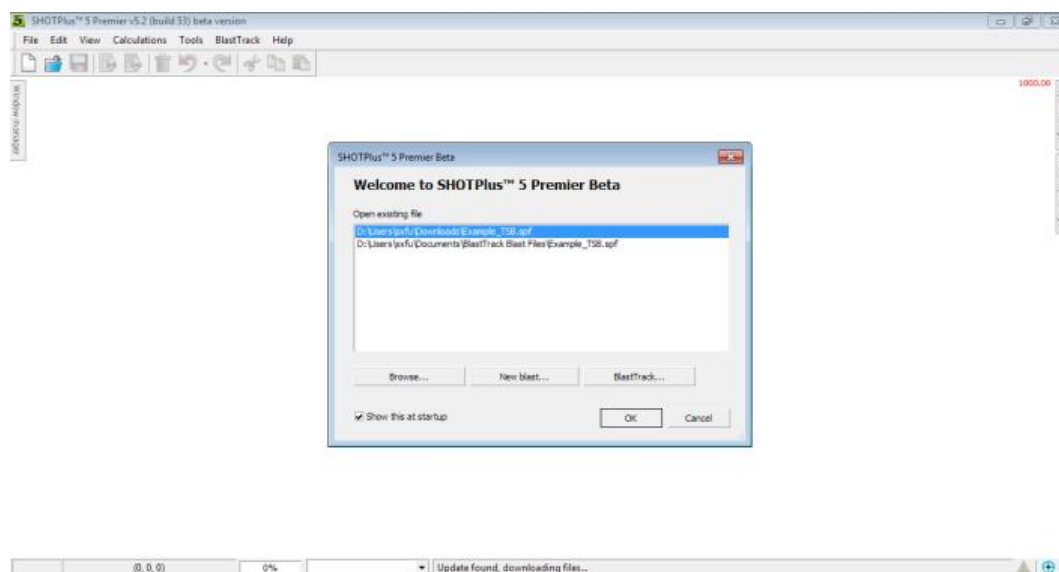
After the update files are downloaded, the user is provided the following choice:

- | | |
|---------------------------|---|
| Update immediately | Close and restart SHOTPlus 5 |
| Update later | Continue working, new version will be installed when you close and re-open SHOTPlus 5 |
| No update | Not recommended. This selection prevents the new version from being installed |



When the user account control pop up appears for *updateandrestart.exe*, select **Yes**. SHOTPlus 5 will then close and reopen. If you receive errors at this time, you may not have sufficient administrator access. Please contact your IT department.

The SHOTPlus 5 home screen, including the Start-up Assistant, is displayed.



9 USING SHOTPLUS 5 WITH BLASTIQ

Section Revision: 0

Revision Date: August 2015

9.1 OVERVIEW

There are currently two methods available for connecting to the BlastIQ system when using SHOTPlus 5, upon *Startup* and *In-use*.

9.2 CONNECTING TO BLASTIQ USING SHOTPLUS 5

To connect to BlastIQ from within SHOTPlus 5, you must have already set up your BlastIQ account. Please see [4.3 INSTALLING BLASTIQ](#) for further information.

The BlastIQ menu available on the SHOTPlus 5 toolbar will allow you to perform all the SHOTPlus 5 actions associated with BlastIQ.

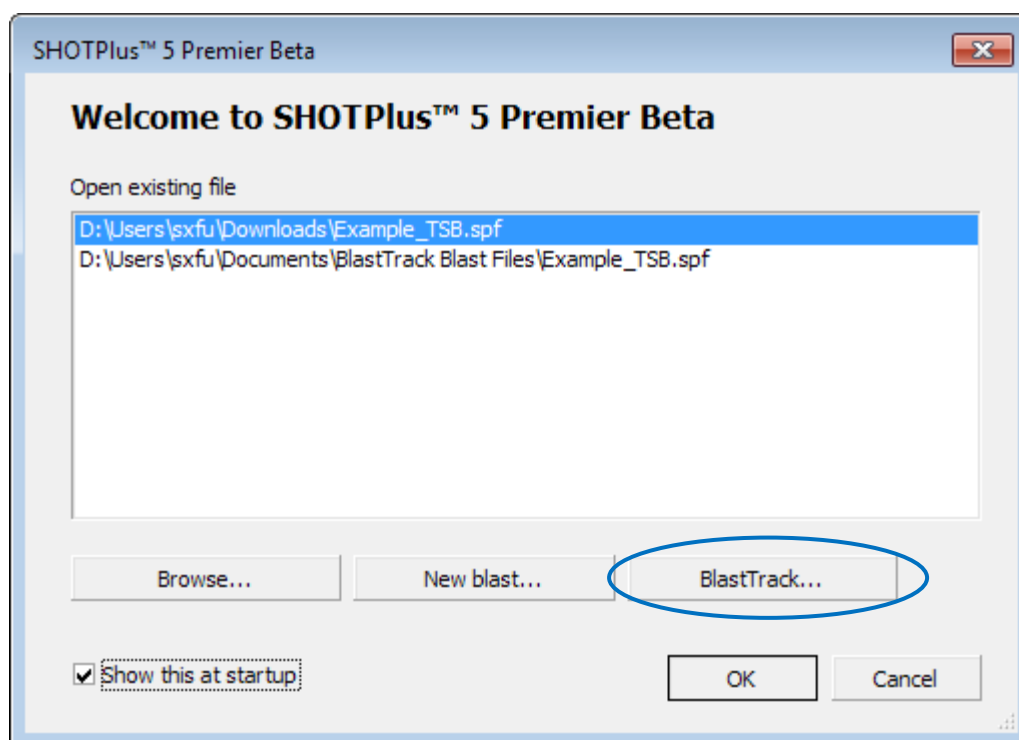
9.2.1 Connecting to BlastIQ at SHOTPlus 5 Startup

1. Open SHOTPlus 5.

The Startup Assistant will appear.

Blasting files already loaded on the BlastIQ system may be selected from BlastIQ.

2. Select **BlastTrack...**



The Select login provider window will appear.

3. Select **BlastTrack accounts @ext.orica.com** if you're an Orica customer
or
Select **Orica Account** if you're an Orica employee

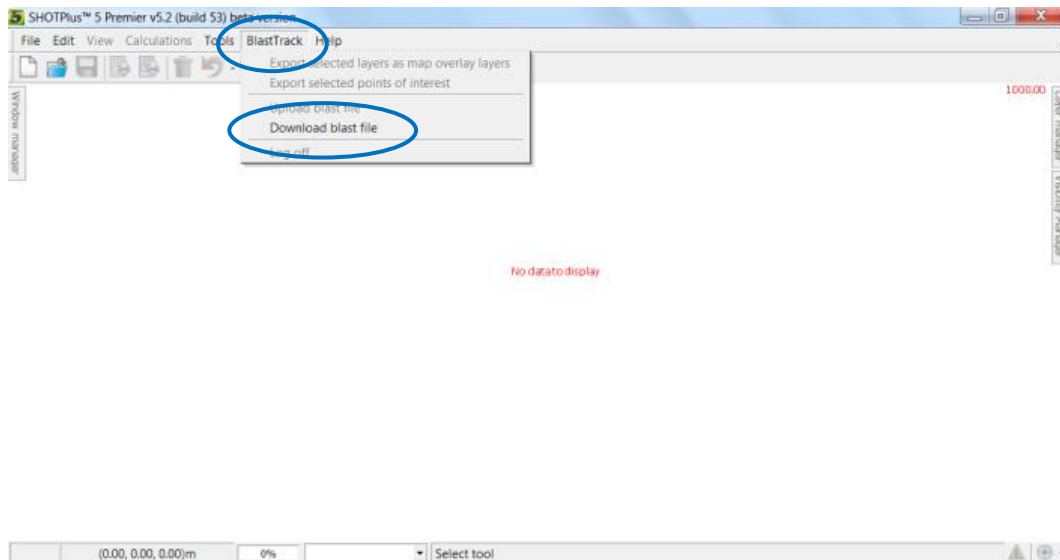


Continue from *Connecting to BlastIQ When SHOTPlus 5 is In-use* [Step 4](#).

9.2.2 Connecting to BlastIQ When SHOTPlus 5 is In-use

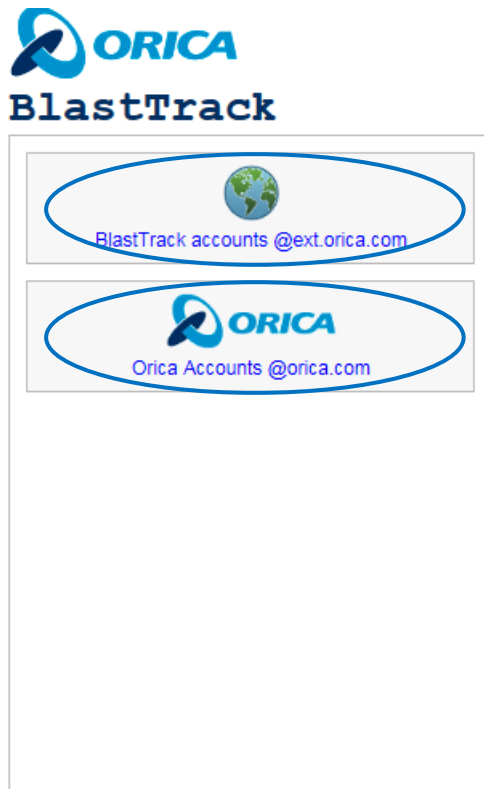
If SHOTPlus 5 is already in-use and the user wants to work on a file from BlastIQ, it can be downloaded in the following manner.

1. Go to the SHOTPlus 5 main screen.
2. Select **BlastTrack / Download blast file**.



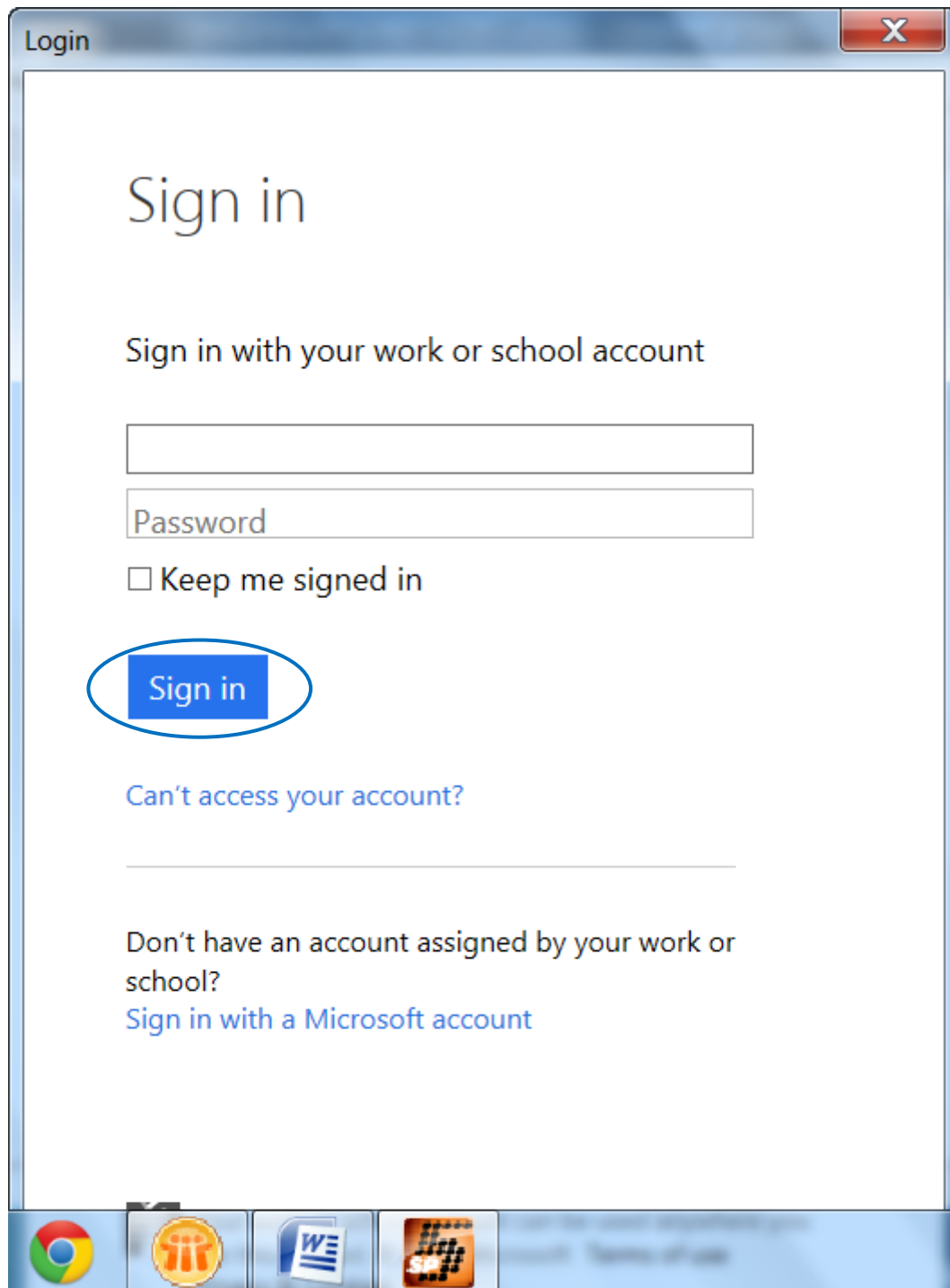
The Select login provider window will appear.

3. Select **BlastTrack accounts @ext.orica.com** if you're an Orica customer
or
Select **Orica Account** if you're an Orica employee



The *Select login provider* window will be displayed when accessing BlastIQ from all other BlastIQ compatible systems.

4. Enter your *username* and *password*.
5. Select **Sign in**.



You'll be presented with a download screen

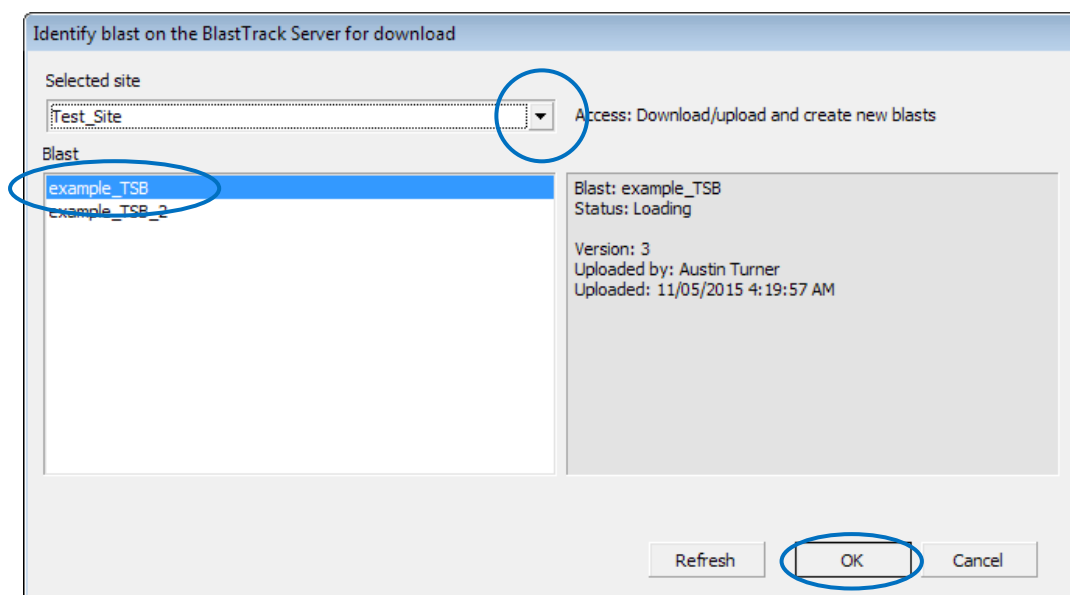
6. From the drop down menu, select the site.

After selecting the site, the available blast files are listed under *Blast*.

7. Preview each blast file by clicking on it once.
8. Information about the blast file will be shown in the box to the right.

When the blast being displayed is the required file:

9. Select **OK**.



After selecting OK, a 'save' window will appear.

This part of the process is creating a local copy of the blast file to work on. To ensure that the BlastIQ file versioning works correctly, you should not change the name of the file.

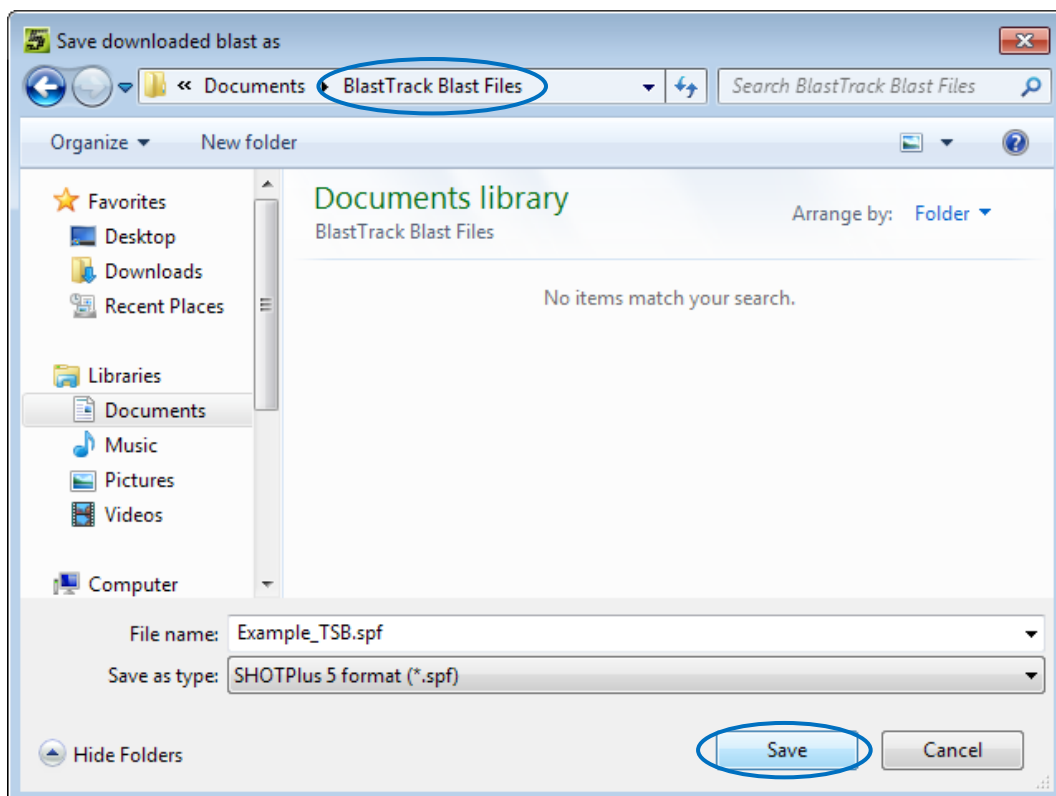
Each time a blast file is uploaded to BlastIQ, the previous version of the file is archived and replaced by the version being uploaded. This allows all users access to the latest file. All archived versions are available for download. This process will be explained further on.

The user is prompted with where to save the file on the computer's local drive.

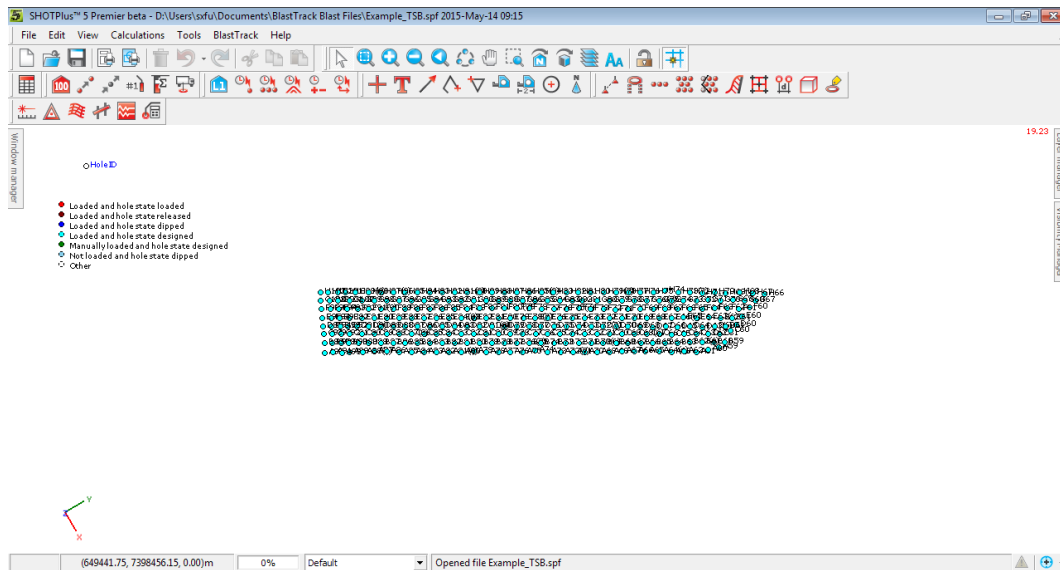
10. Select an appropriate location to save the blast file.

Remember to let the BlastIQ system manage the file versioning; always save the file using the same file name. When prompted to 'Replace existing file', select OK.

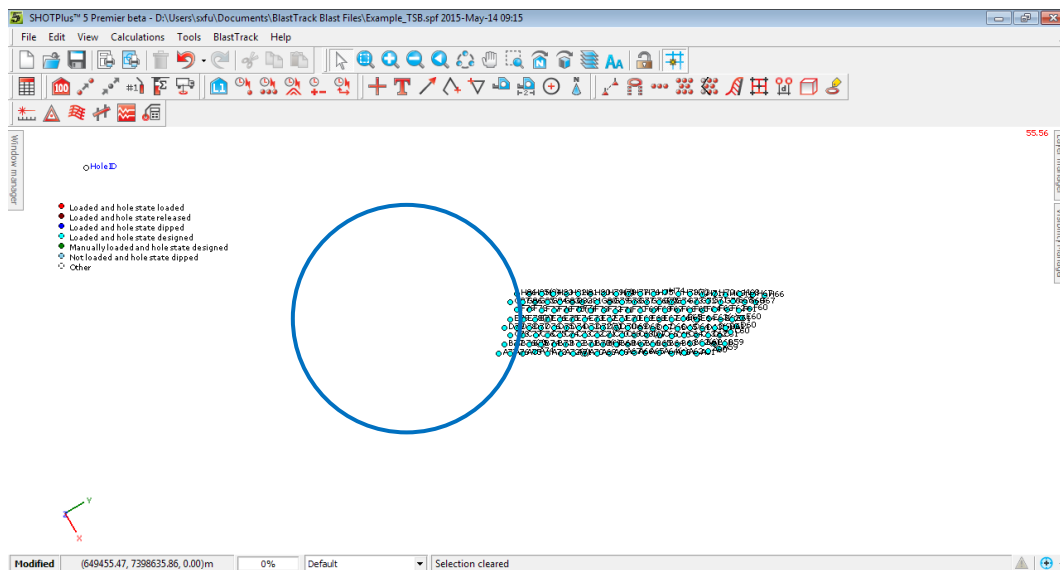
11. Select **Save**.



The SHOTPlus 5 blast file is now available for viewing or modification.

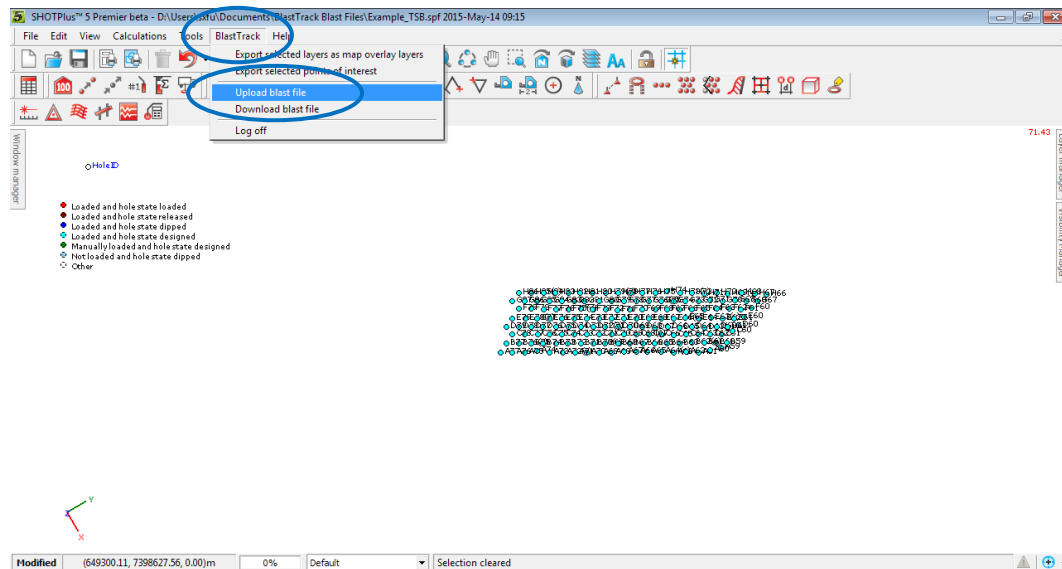


For the purpose of this guide, the quantity of holes has been reduced to demonstrate a change being made.



After completing any changes you should upload the blast file to BlastIQ for these changes to become available to other users.

12. Select **BlastTrack / Upload blast file**.

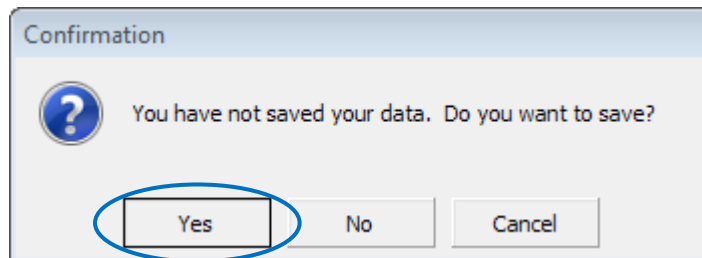


At this time, the user is provided with a *Confirmation* window.

Selecting *Yes* saves your changes to your local copy before uploading.

Selecting *No* will allow you to upload without saving the changes locally.

13. Select **Yes / No**.



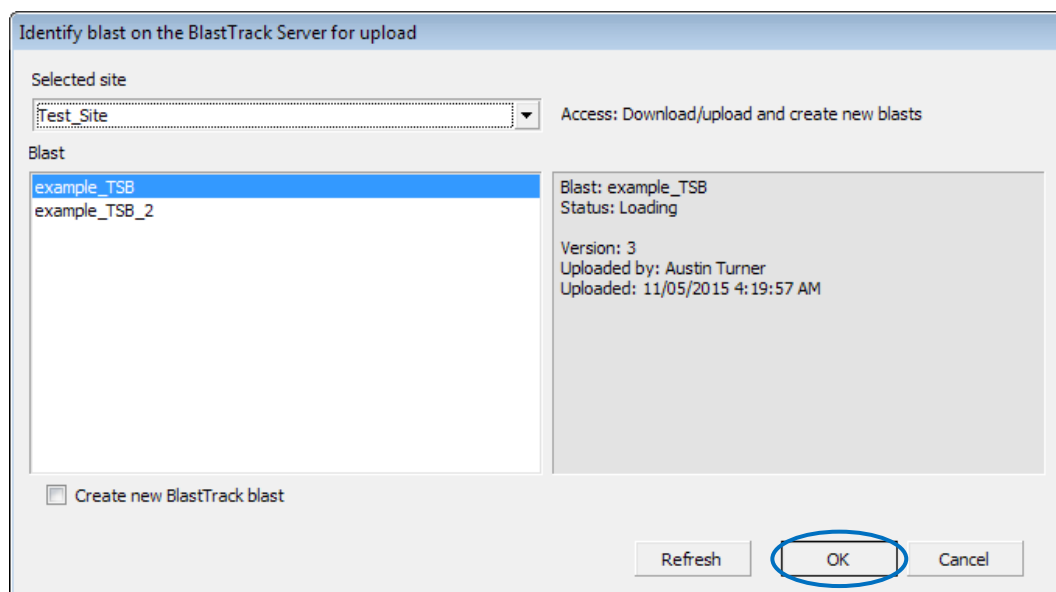
If the blast file has been saved in BlastIQ previously, the system will prompt the user to select the blast to upload the file to.

If the blast file is being saved for the first time, a different process will occur. See 9.3 Creating a New BlastIQ Blast File Using SHOTPlus 5.

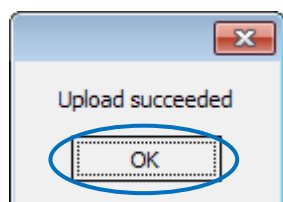
The *Upload* window is displayed.

The BlastIQ system will auto-populate the *Selected site* and *Blast* fields.

14. Confirm the *Selected site* and *Blast* fields are correct
15. Select **OK**.



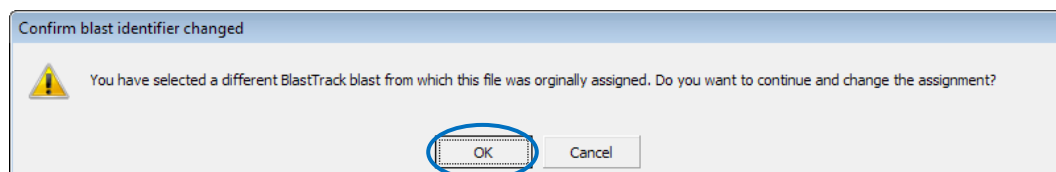
Successful upload is shown by:



16. Select **OK**.

When uploading a blast file, BlastIQ detects if the file is from a different BlastIQ blast and will prompt the user to confirm that this file should be loaded in this location.

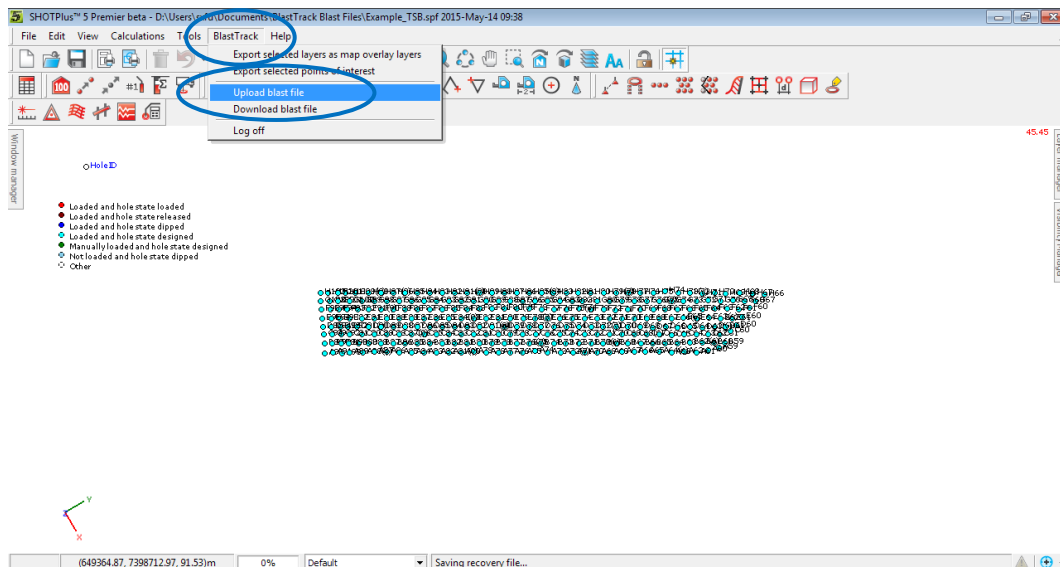
17. If this is your intention, select **OK**.



9.3 CREATING A NEW BLASTIQ BLAST FILE USING SHOTPLUS 5

When a new blast is designed in SHOTPlus 5, a new blast file must be created in BlastIQ.

1. Create the new file using SHOTPlus 5.
2. Select **BlastTrack / Upload blast file**.



The *Upload* window is displayed.

3. Select the site using the *Selected site* drop-down list.
4. Place a 'tick' in the *Create new BlastTrack blast* box.

Identify blast on the BlastTrack Server for upload

Selected site
Test_Site

Access: Download/upload and create new blasts

Blast

example_TSB
example_TSB_2

Blast: example_TSB
Status: Loading
Version: 5
Uploaded by: Scott Feeney
Uploaded: 13/05/2015 11:39:04 PM

☒ Create new BlastTrack blast

Blast name
Orica reference (optional)
Customer reference (optional)

Description (optional)

Create new blast

Refresh OK Cancel

5. Enter the **Blast name**.
6. Enter the **Orica reference (optional)**.
7. Enter the **Customer reference (optional)**.
8. Enter the **Description (optional)**.

The blast name must be unique for open blasts on the site. The same name may appear across multiple sites.

The *Orica reference*, *Customer reference* and *Description* will show up for all users downloading the blast in the future and on all other BlastIQ systems.

Identify blast on the BlastTrack Server for upload

Selected site
Test_Site Access: Download/upload and create new blasts

Blast
example_TSB
example_TSB_2

Blast: example_TSB
Status: Loading
Version: 5
Uploaded by: Scott Feeney
Uploaded: 13/05/2015 11:39:04 PM

☒ Create new BlastTrack blast

Blast name
example_createblast

Orica reference (optional)
Example Orica reference

Customer reference (optional)
Example Customer reference

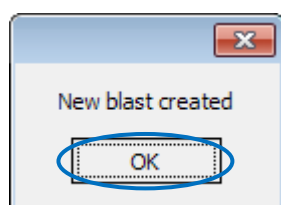
Description (optional)
Example Description

Create new blast

Refresh OK Cancel

9. Select **Create new blast**.

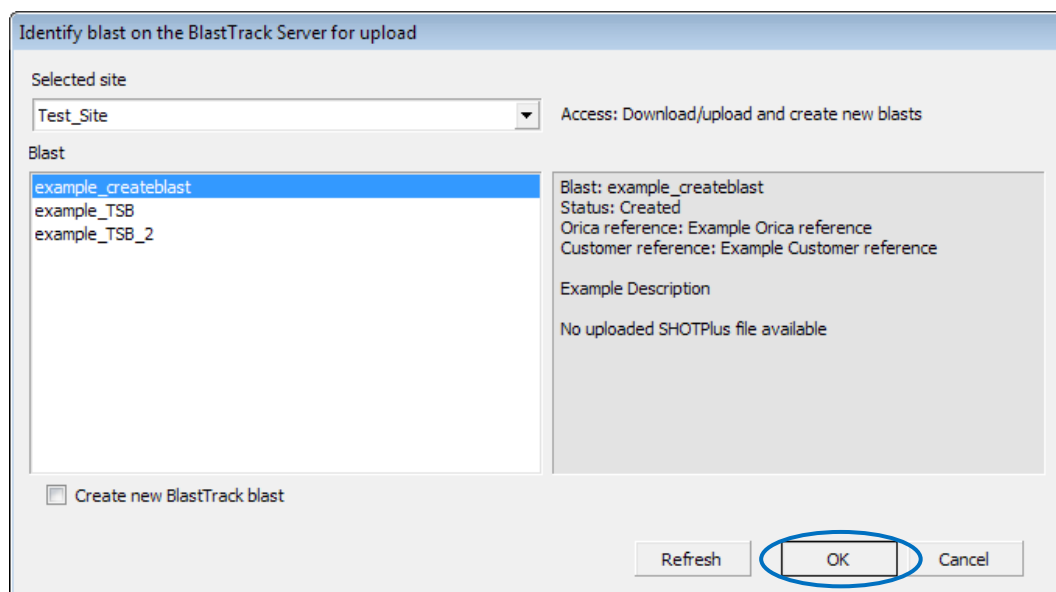
Successful new blast creation is shown with the following window.



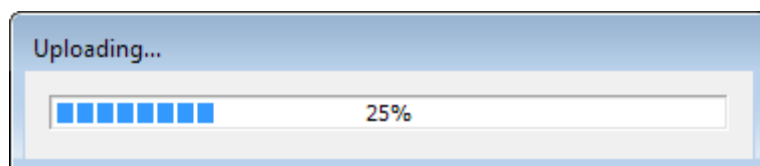
10. Select **OK**.

The new blast now appears in the blast list. The details entered appear in the box to the right. At this stage, it should be noted, there is *No uploaded SHOTPlus file available*.

11. Select **OK** to upload the current SHOTPlus 5 file to the new blast.

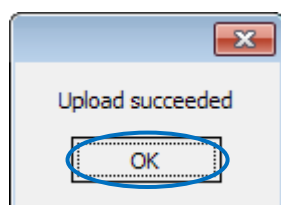


The SHOTPlus 5 file will upload.



After the file has uploaded, *Upload succeeded* will display.

12. Select **OK**.



The new blast and the blast file are now available for use by other users.

9.4 MANAGING DESIGN VERSIONS USING BLASTIQ

Throughout the blast process there can be many design changes. Some of these changes are updates to the design due to real life data provided by the parts of the BlastIQ system, other updates are refinements to the design: trying different things to achieve a better outcome from the blast design. In order to ensure that the latest blast design file is being worked on, it should be downloaded from BlastIQ each time, and uploaded after it has been worked on, to ensure that any changes are available for the next user. It will automatically include any changes made by any part of the BlastIQ system; if a hole has been dipped etc, that new information will be incorporated into the latest design file.

The version number will be incremented each time the file is uploaded to BlastIQ. It will also record who uploaded it and when. Each of the previous files are also available for downloading, if required, from BlastIQ.

Listed below are the current stages that the blast design goes through during its life cycle.

9.4.1 Hole States

- | | | |
|----|----------|--|
| 1. | DESIGN | hole position and length has been designed |
| 2. | DIPPED | hole drilled and measured |
| 3. | RELEASED | redrilling or backfilling has been completed and the hole is available for loading |
| 4. | LOADED | hole has been loaded and the loading information has been recorded |

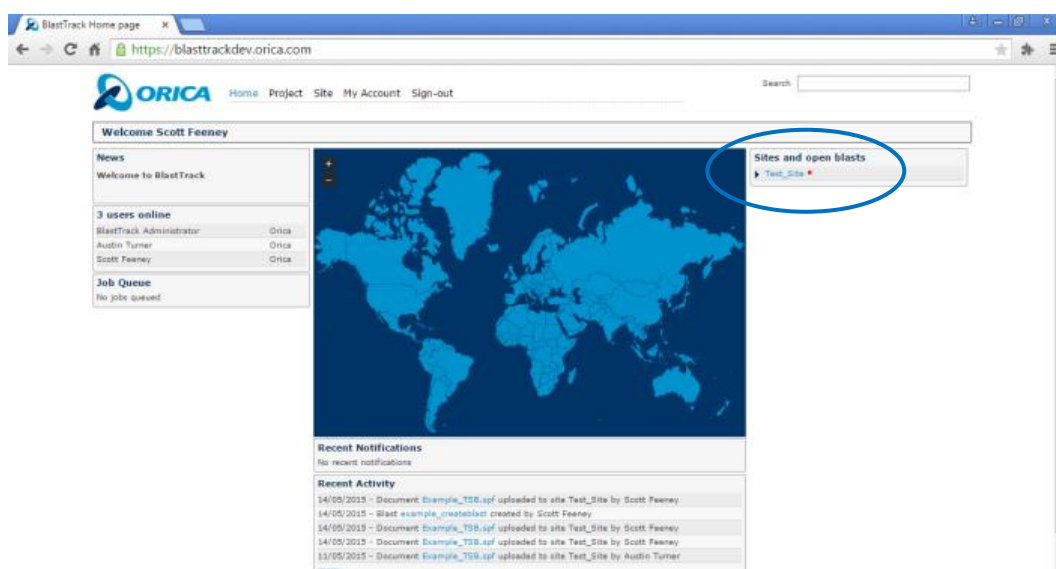
9.4.2 Blast States

- | | | |
|----|----------|---|
| 1. | CREATED | blast has an ID and name created in BlastIQ |
| 2. | SURVEYED | survey information has been imported |
| 3. | DESIGNED | blast hole positions are designed, loading is designed |
| 4. | RELEASED | the blast has been approved and is available for loading |
| 5. | LOADING | product loading is in progress |
| 6. | FIRED | blast has been fired and post blast measurements are being recorded |
| 7. | CLOSED | the blast life cycle is complete. The blast will no longer appear in other BlastIQ connected systems; only BlastIQ. The blast name can be reused. |

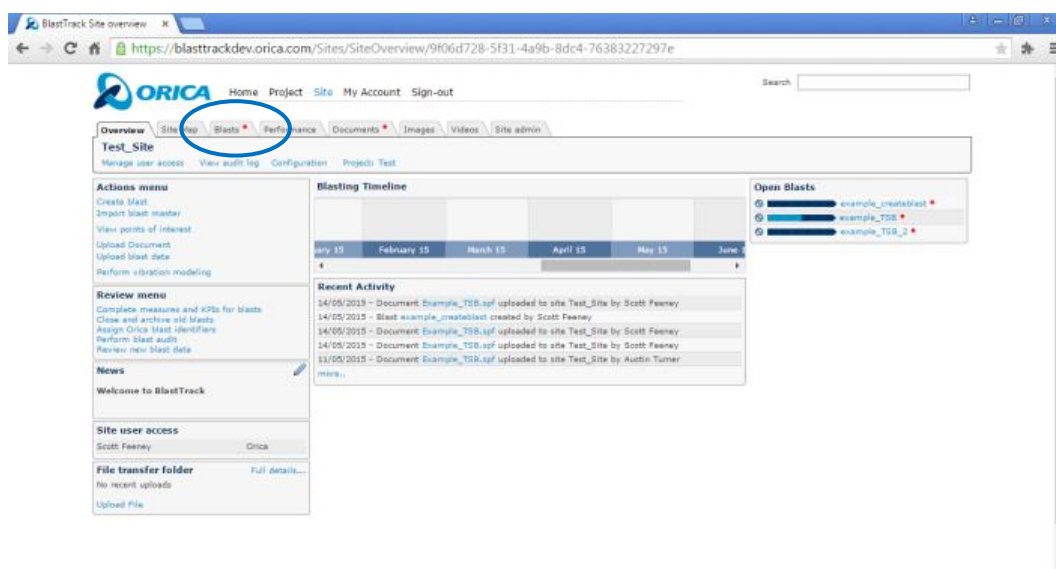
9.5 ACCESSING PREVIOUS VERSIONS FROM BLASTIQ

BlastIQ retains all previous versions of the blast file, but prompts the user to select the latest version to work with. If an earlier version is required for viewing, or if the decision has been made to revert back to an earlier version, BlastIQ provides that capability.

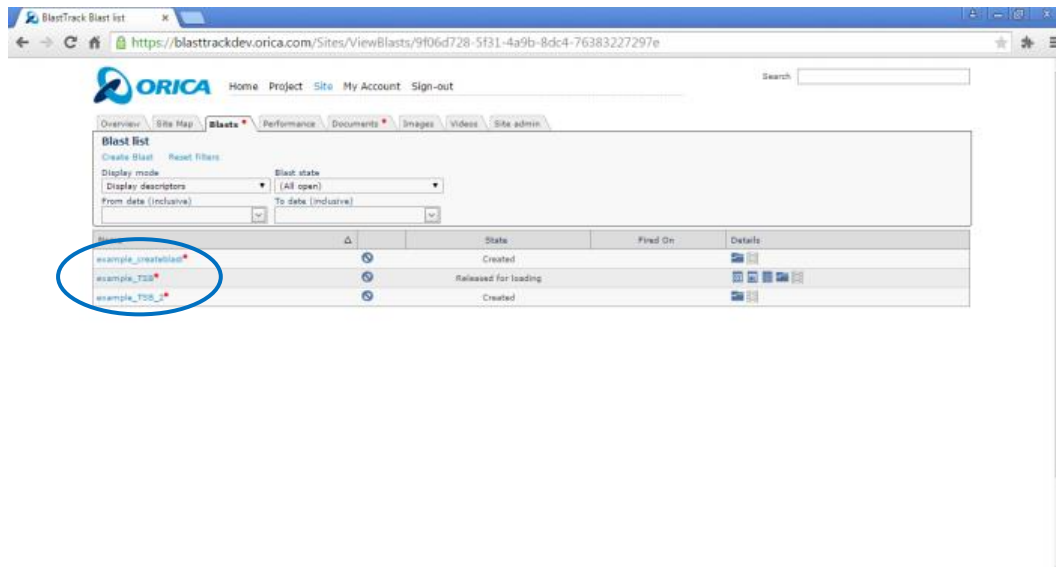
1. Go to the *BlastIQ Home page*.
2. Select the **Site** from the Sites and open blasts list.



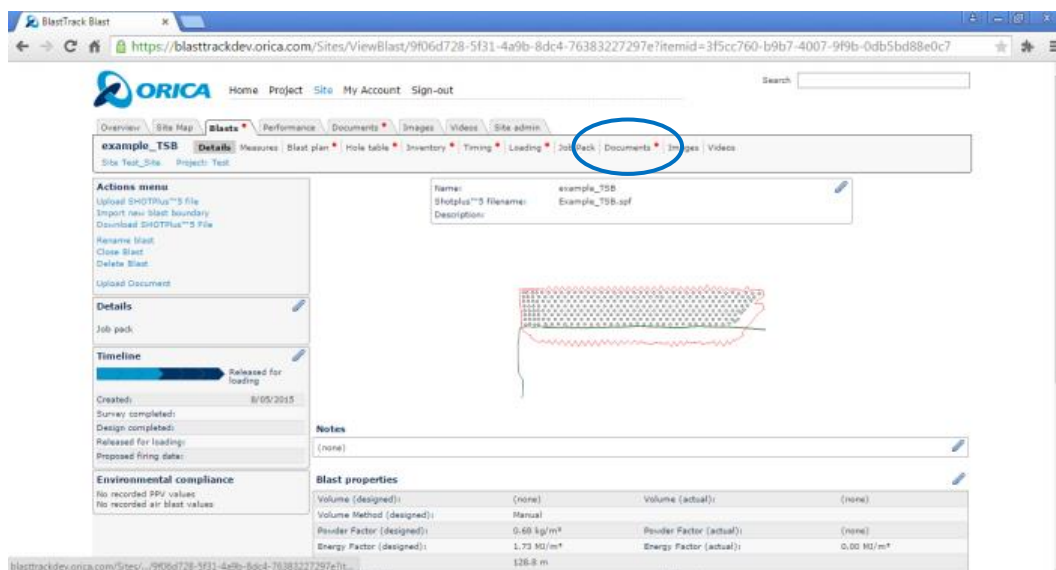
3. Select the **Blasts** tab.



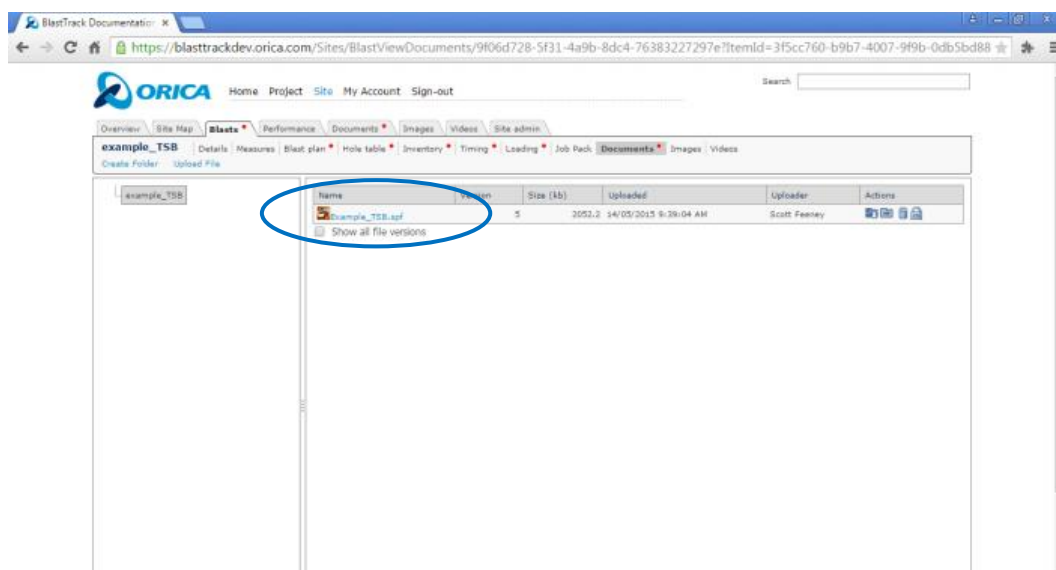
4. Select the **Blast** from the *Blast list*.



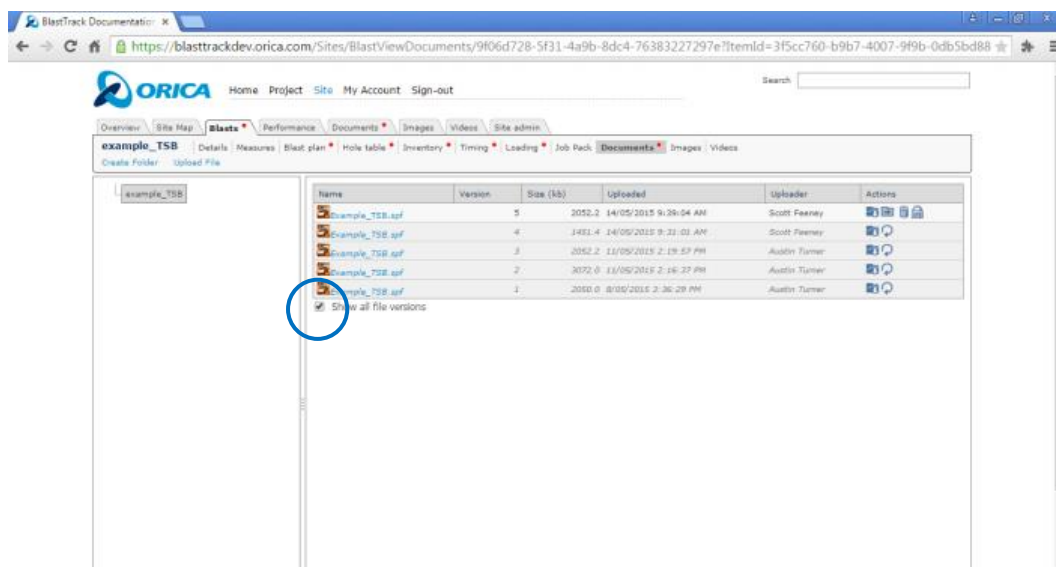
5. Select **Documents** from inside the *Blasts* tab. Do not select the *Documents* tab at the top.



By default, only the latest file version will be shown.



6. To display all versions, place a 'tick' in the *Show all file versions* box.
All versions of the file are now displayed.



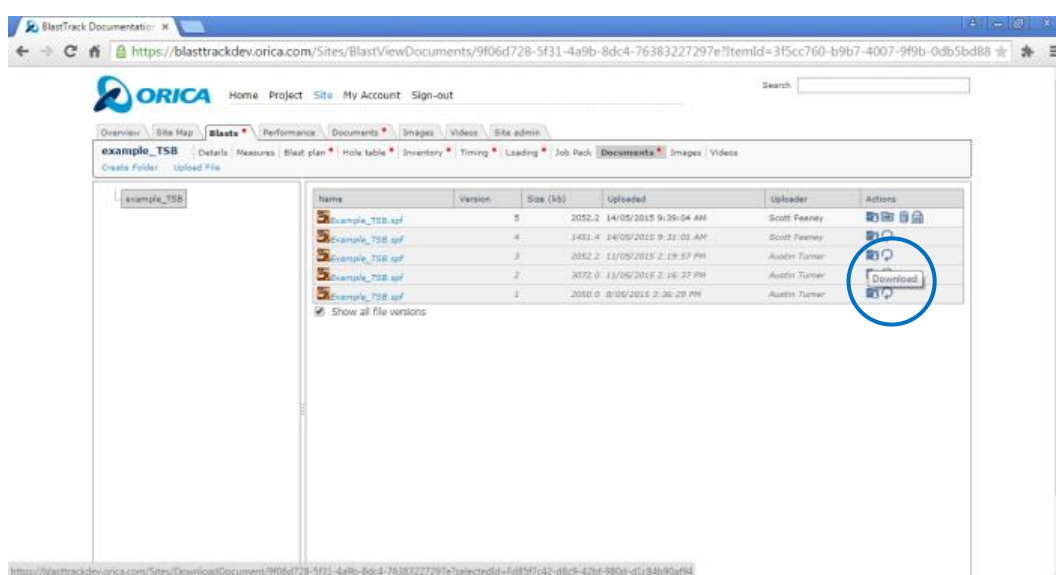
The file list displays the current and all previous versions. Each version includes information relating to file size, the date and time when it was uploaded and by whom. The user then has the two options:

- A. Download Downloads and creates a local copy of that version
- B. Revert It makes the archived file version selected into a new, latest version, e.g. selecting Version 3 and selecting *Revert*, will make a copy of Version 3 and name it Version 6 (and by default, the current version). THIS SHOULD ONLY BE PERFORMED AFTER CAREFUL CONSIDERATION.

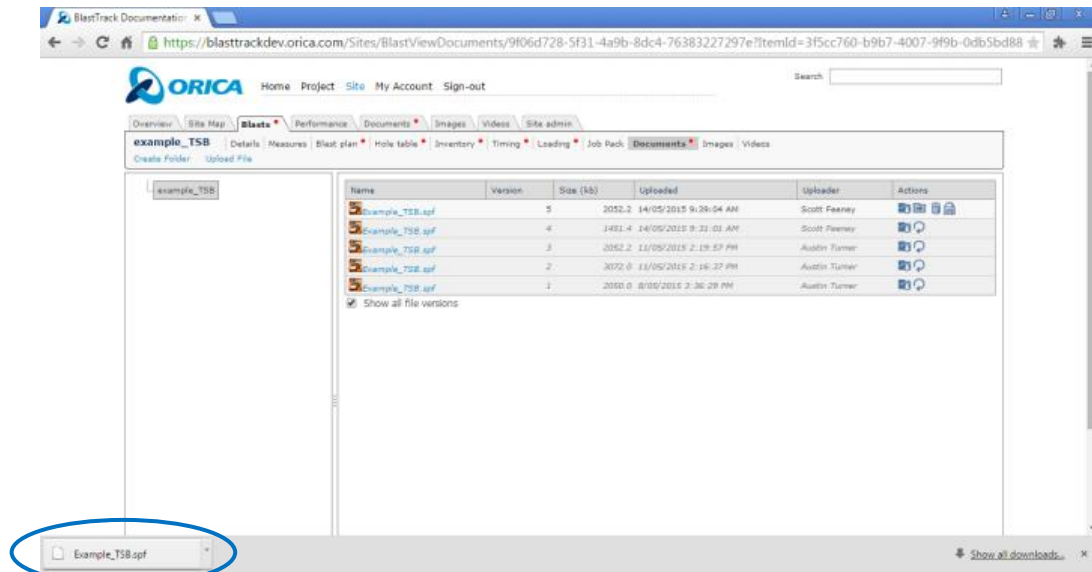
9.5.1 Downloading a Previous SHOTPlus 5 File

To download a previous version:

1. Select the **Download** icon related to the file.

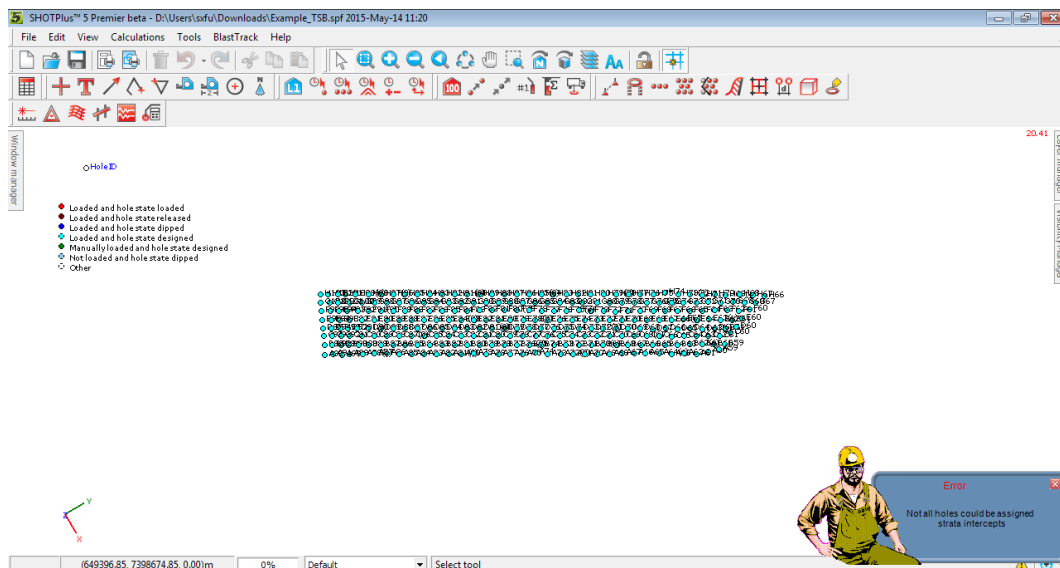


The selected blast file downloads and appears down the bottom left corner of the window.



2. Open the file by 'left clicking' it.

The previous file now opens in SHOTPlus 5.



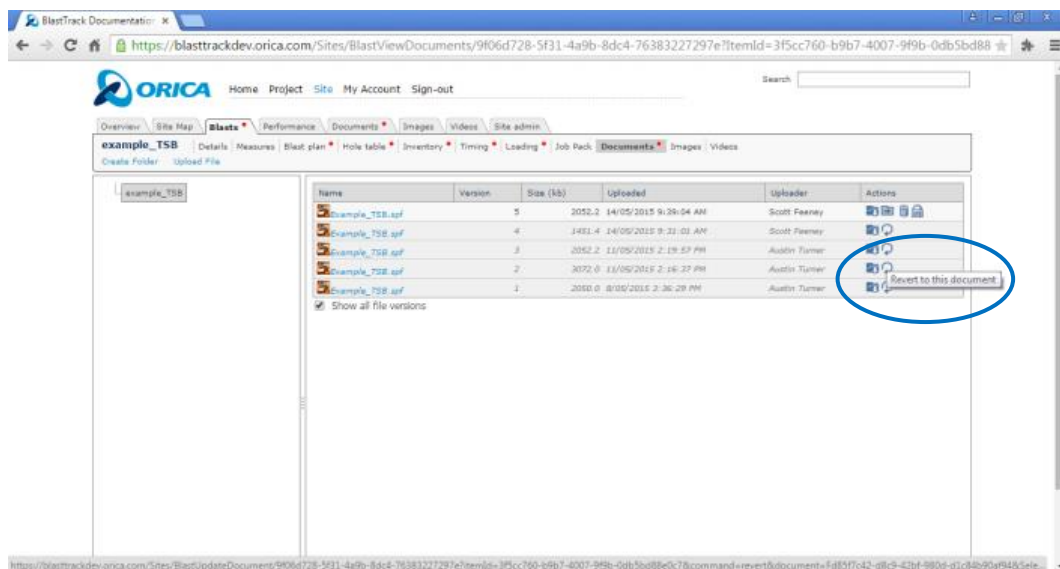
9.5.2 Reverting to a Previous SHOTPlus 5 File

NOTICE

Careful consideration must be made prior to reverting to a previous version of a blast file.

To revert to a previous version:

1. Select the **Revert** icon related to the file.



10 BLASTER'S DESKTOP

Section Revision: 0

Revision Date: August 2015

10.1 OVERVIEW

Blaster's Desktop is a desktop application that consolidates Orica's blasting related software to allow each to be selected for download. Blaster's Desktop also manages the licensing process.

10.2 INSTALLING BLASTER'S DESKTOP FOR ORICA USERS

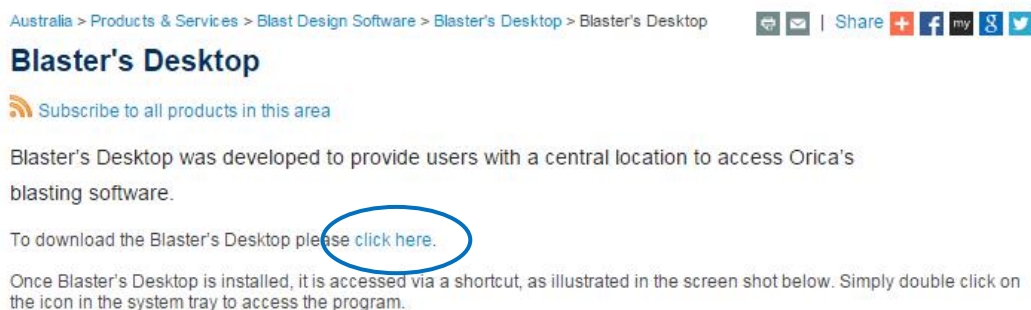
Ensure the following steps are performed when connected to the Orica network.

1. Open your internet browser (Internet Explorer is the current Orica system default).
2. Go to

http://www.oricaminingservices.com/au/en/page/products_and_services/blast_design_software/blasters_desktop/blasters_desktop

The Blaster's Desktop webpage is displayed.

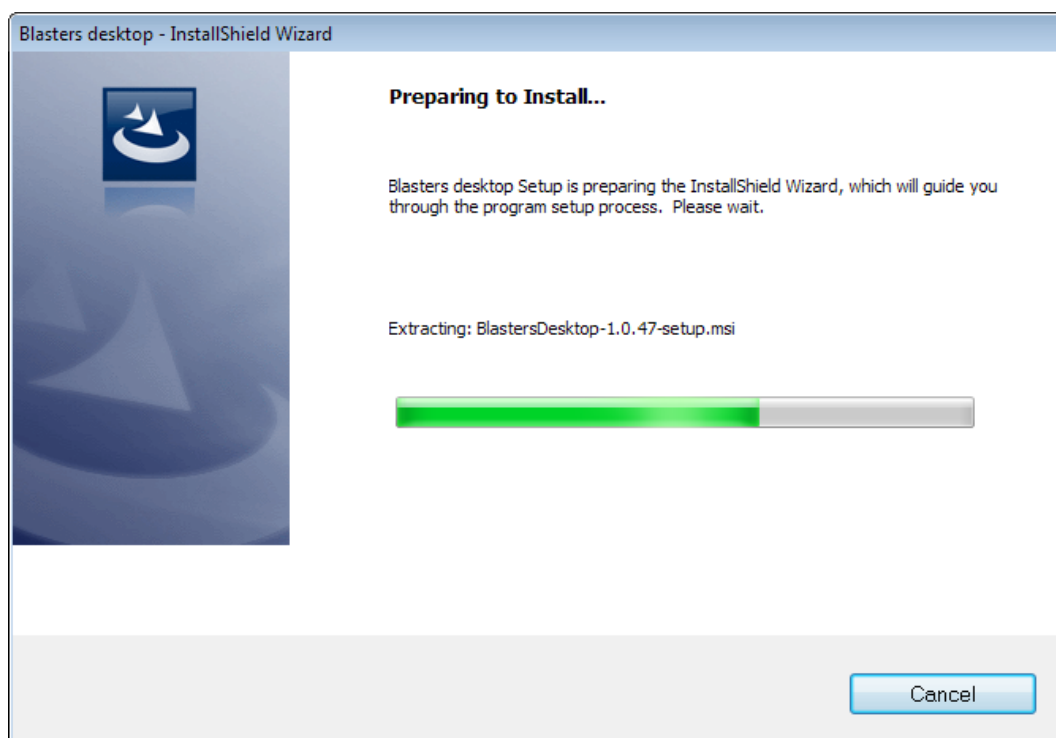
3. Select **click here**.



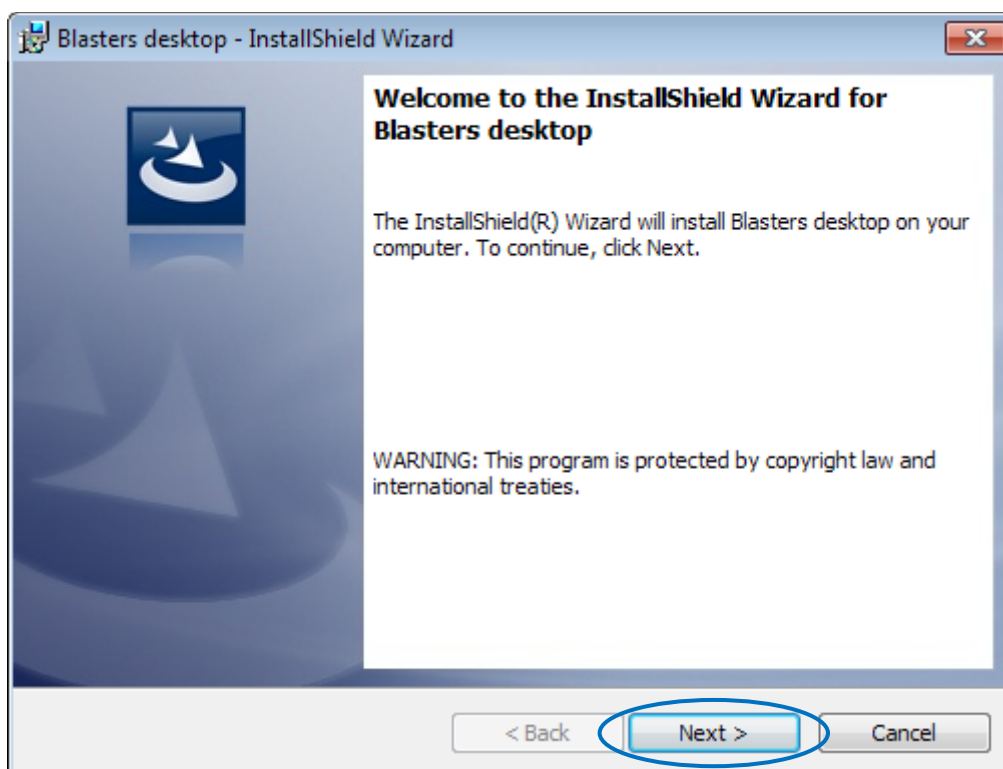
The loading utility *set-up.exe* will download.

4. Select **set-up.exe** to run it.
5. If presented with a user account control message, select **Yes**.

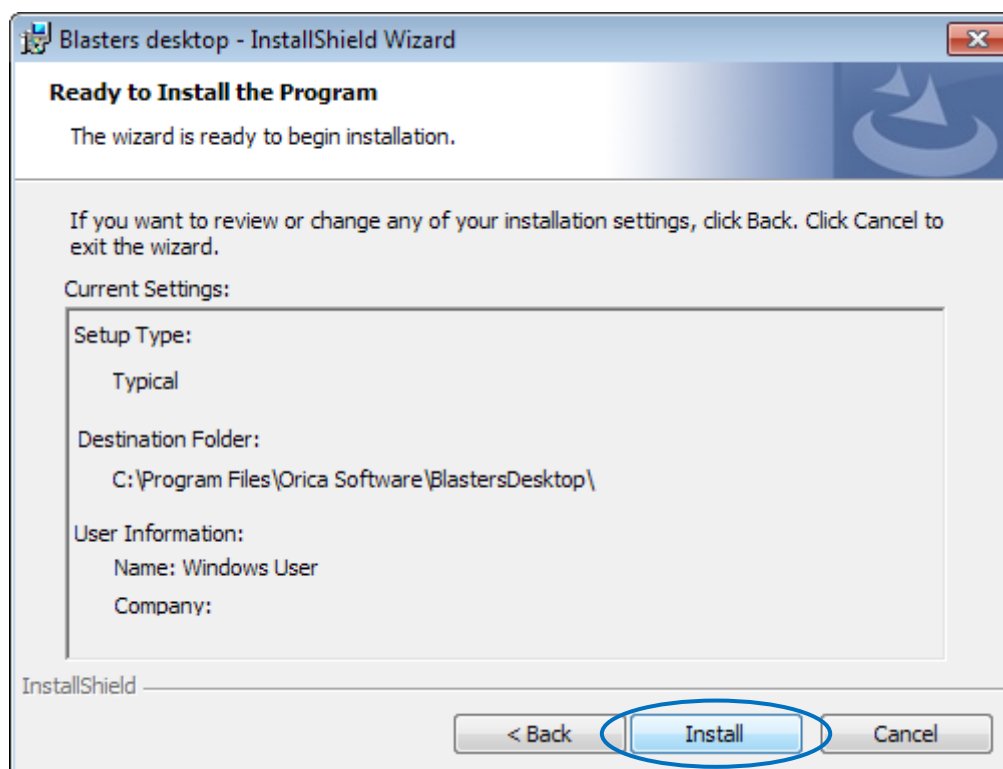
The *InstallShield Wizard* will begin the installation.



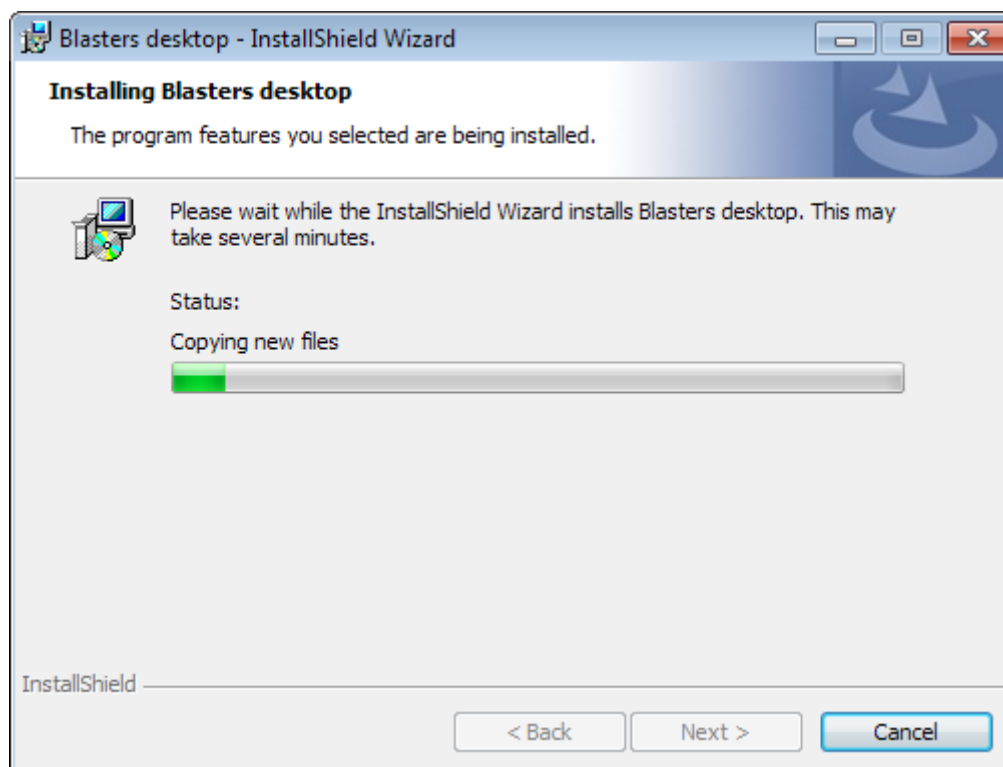
6. Select **Next**.



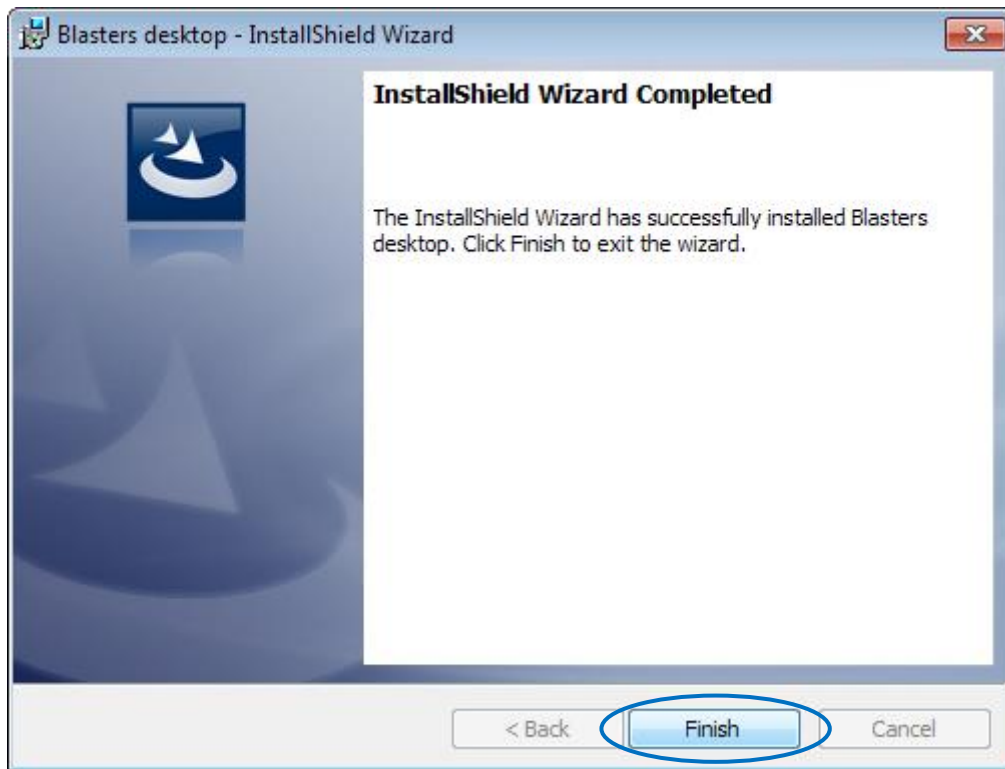
Select **Install**.



InstallShield Wizard will continue the installation.



Select **Finish**.



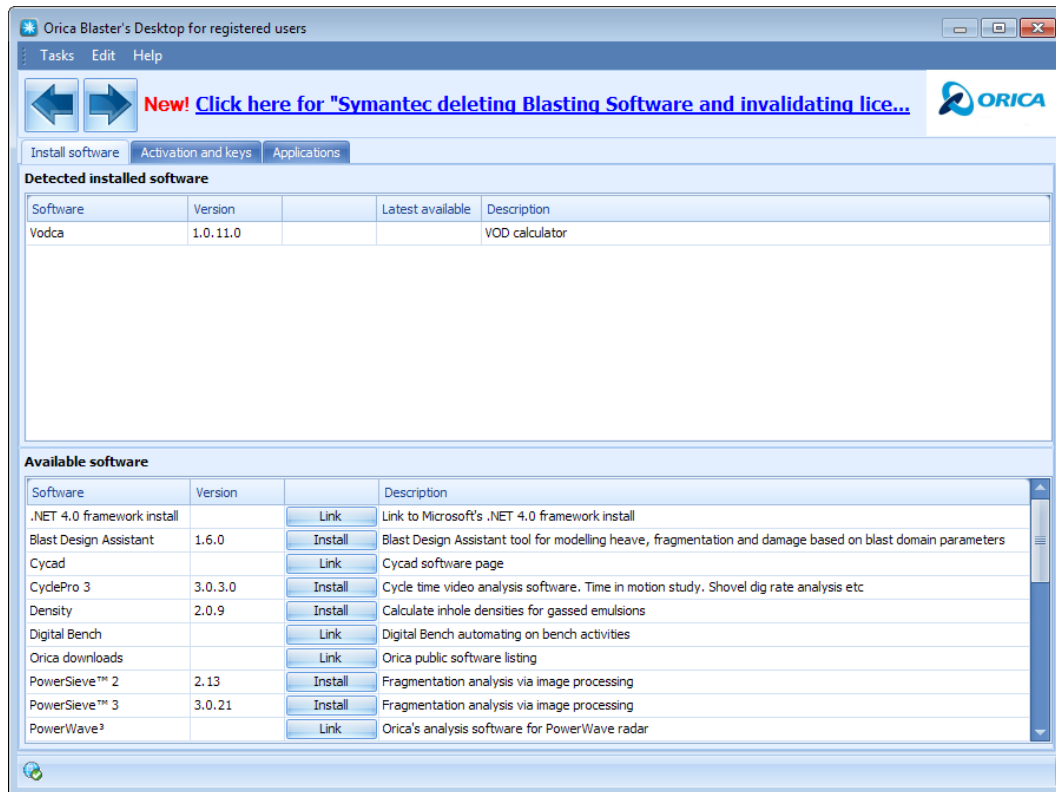
Once Blaster's Desktop has been installed, it is accessed using the desktop shortcut shown below. Simply 'double click' on the icon to access the program.



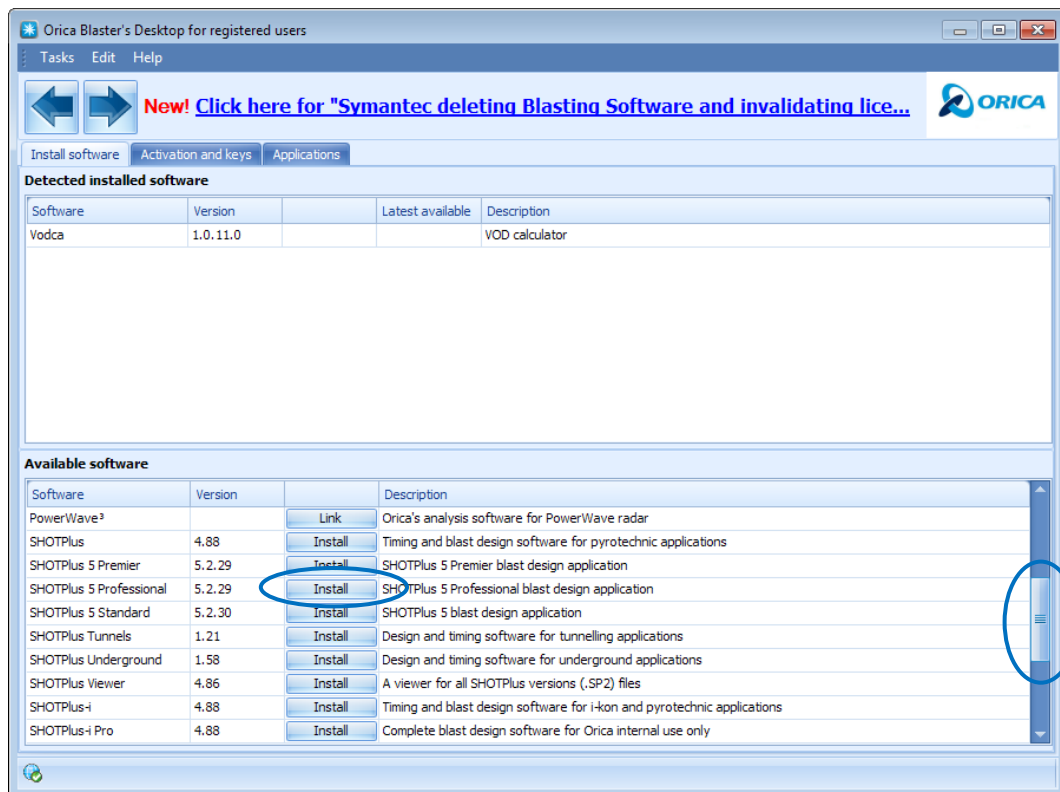
10.3 INSTALLING SHOTPLUS 5 USING BLASTER'S DESKTOP FOR ORICA USERS

Ensure the following steps are performed when connected to the Orica network.

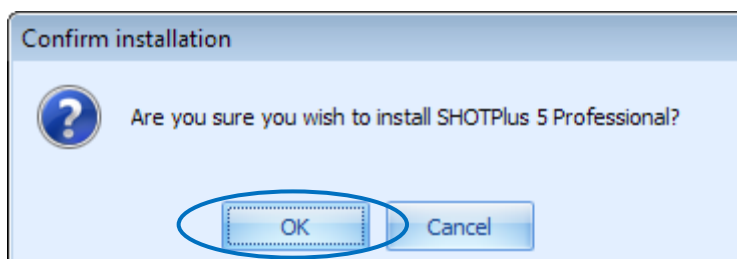
1. Open *Blaster's Desktop*.



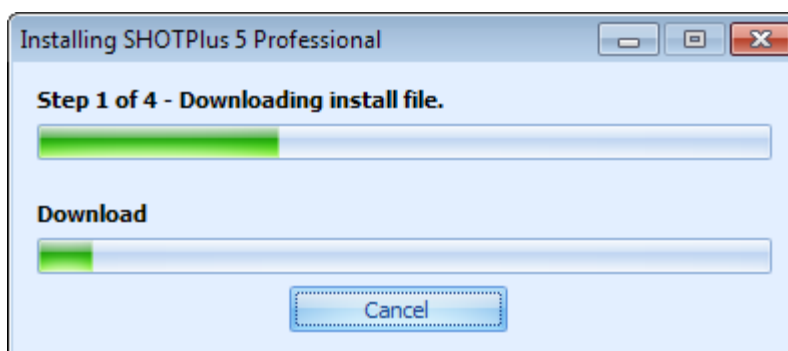
2. Scroll down using the scroll bar until *SHOTPlus 5 Professional* is visible.
3. Select **Install** (beside *SHOTPlus 5 Professional*).



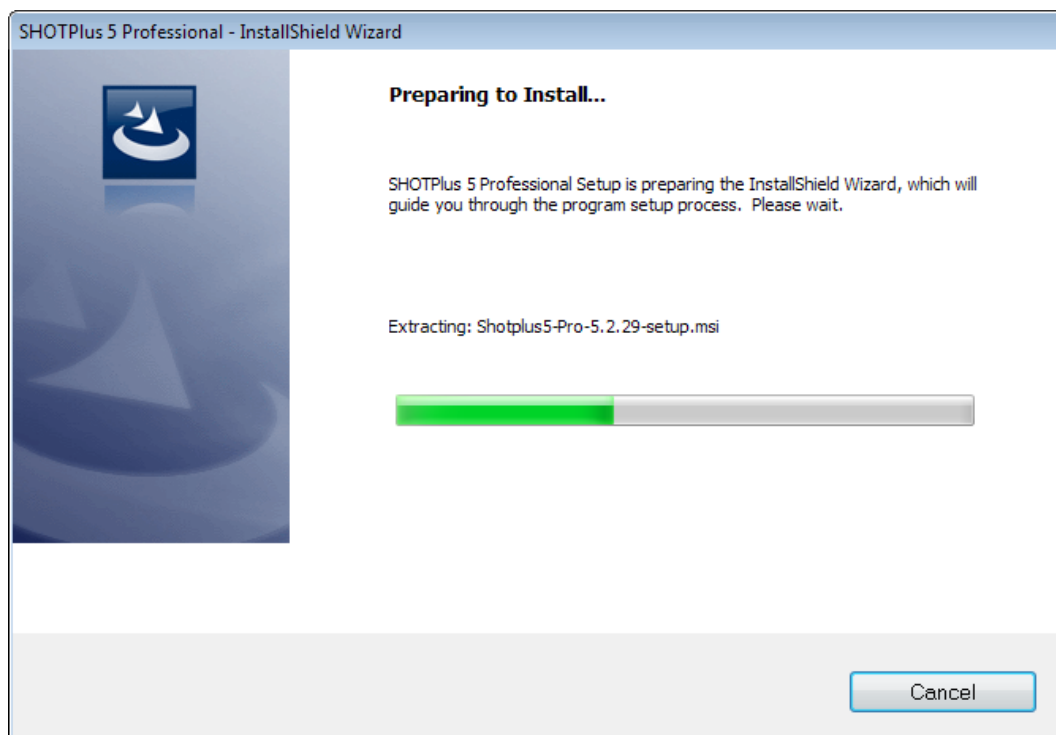
4. Select **OK**.



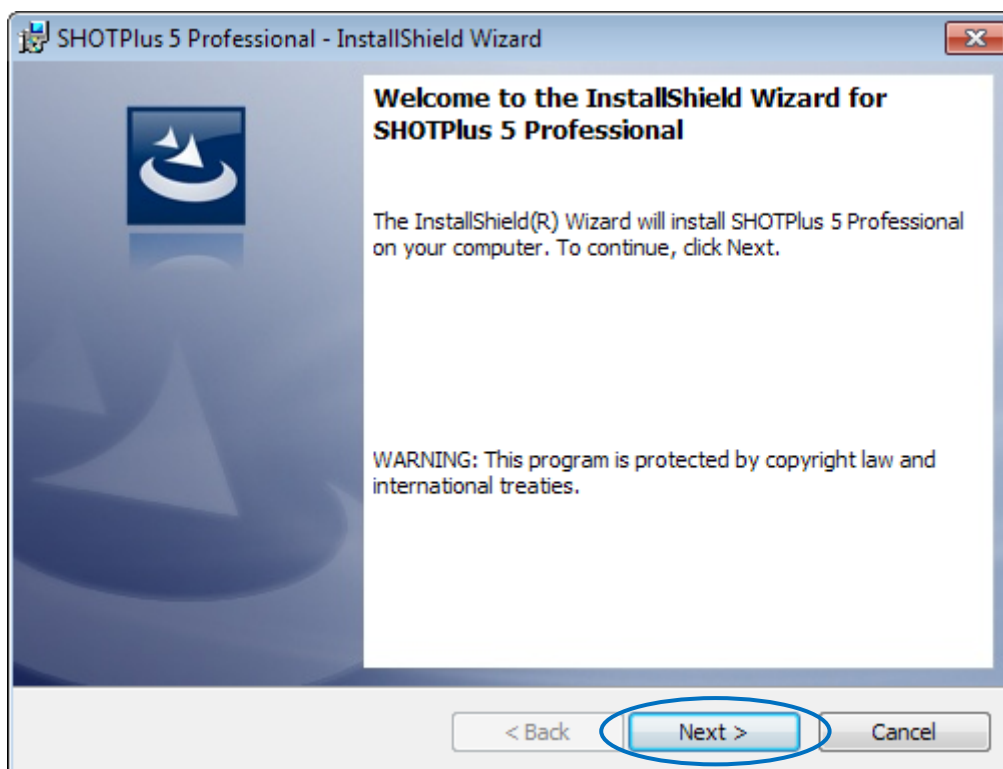
SHOTPlus 5 installation files will download.

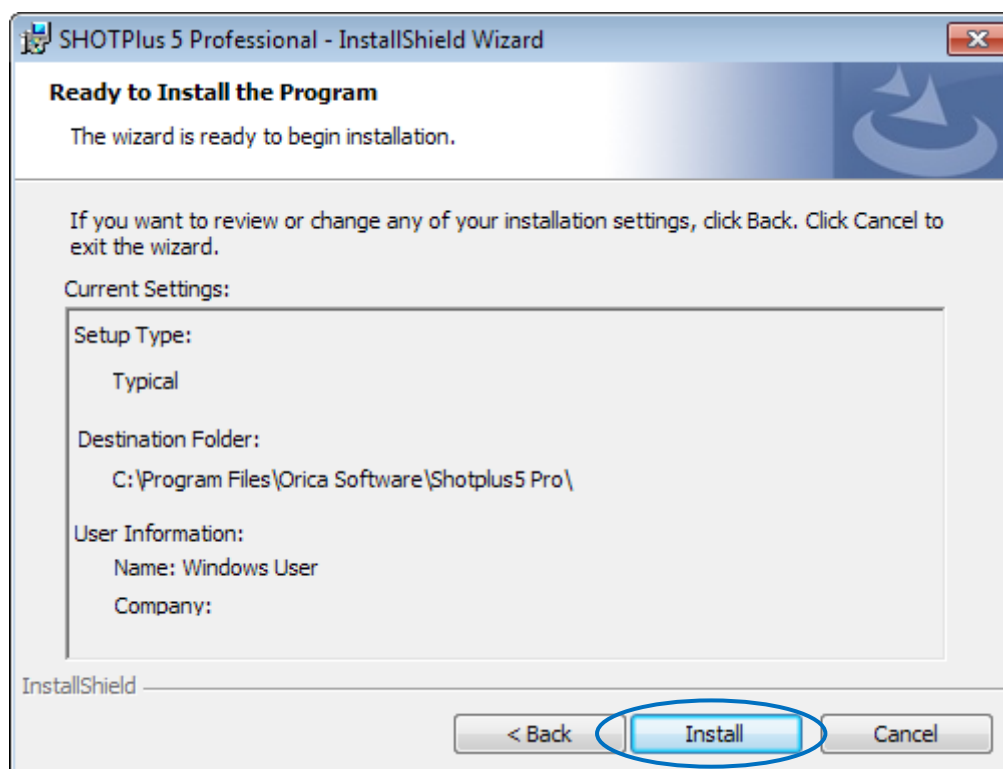


5. If presented with a user account control message, select **Yes**.
The *InstallShield Wizard* will begin the installation.

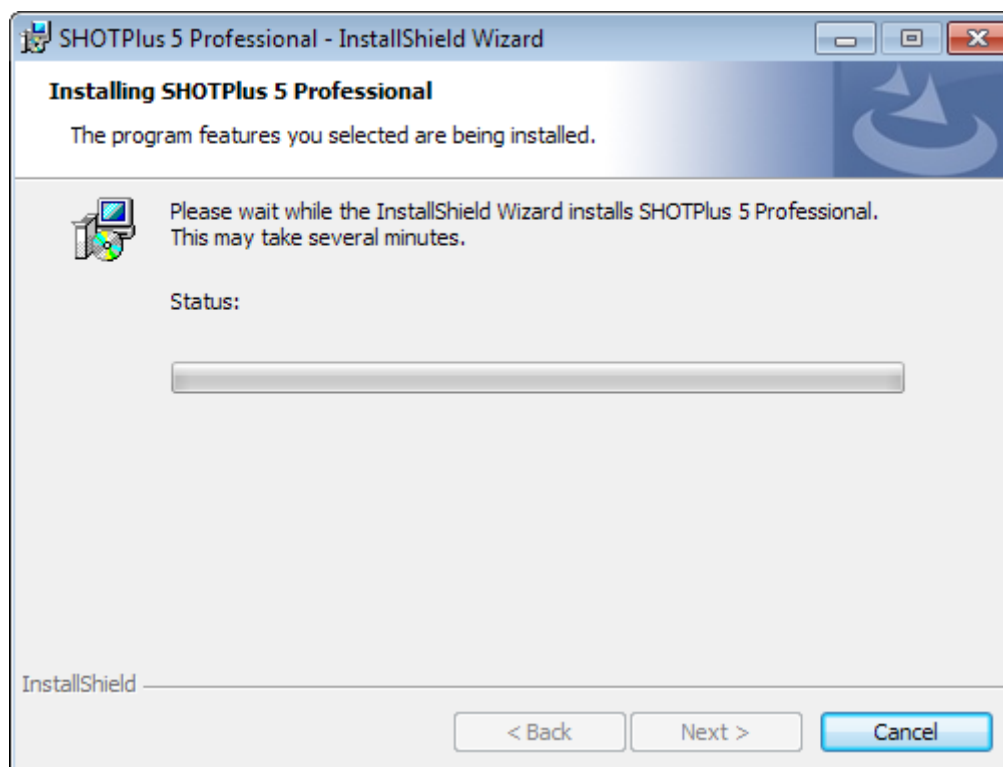


6. Select **Next**.

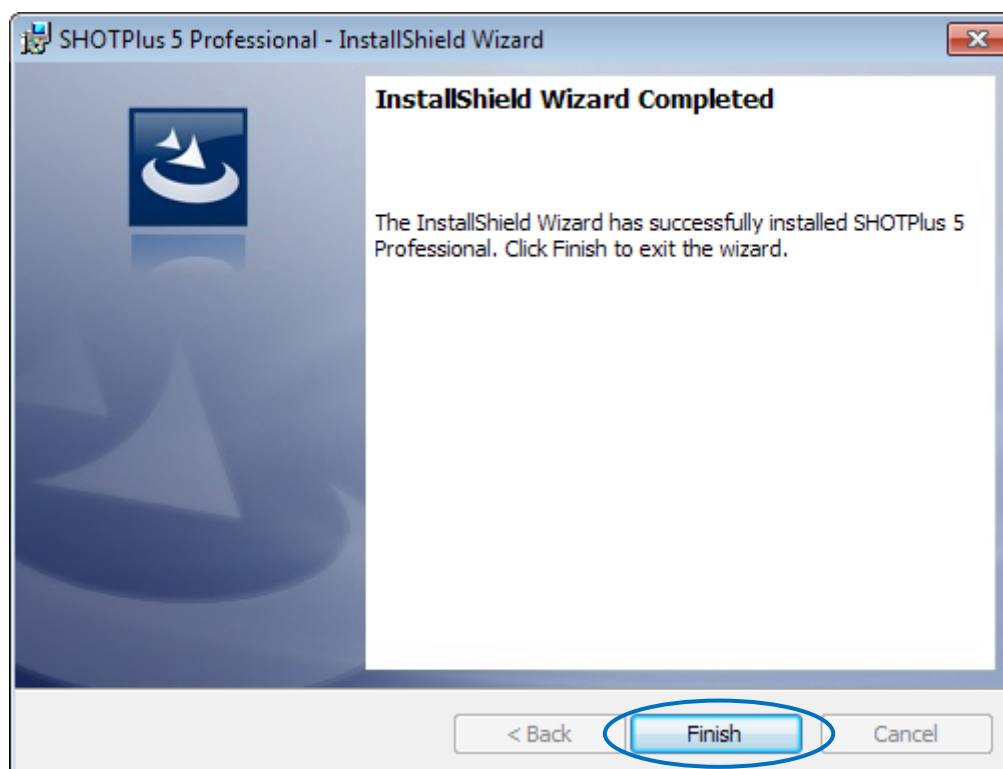


7. Select **Install**.

The InstallShield Wizard will continue the software installation.

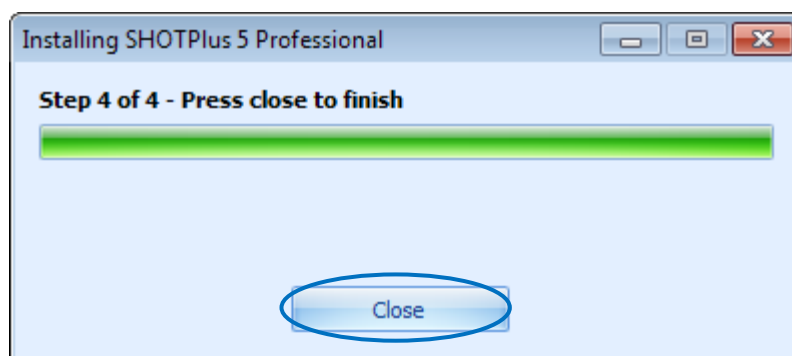


8. Select **Finish**.



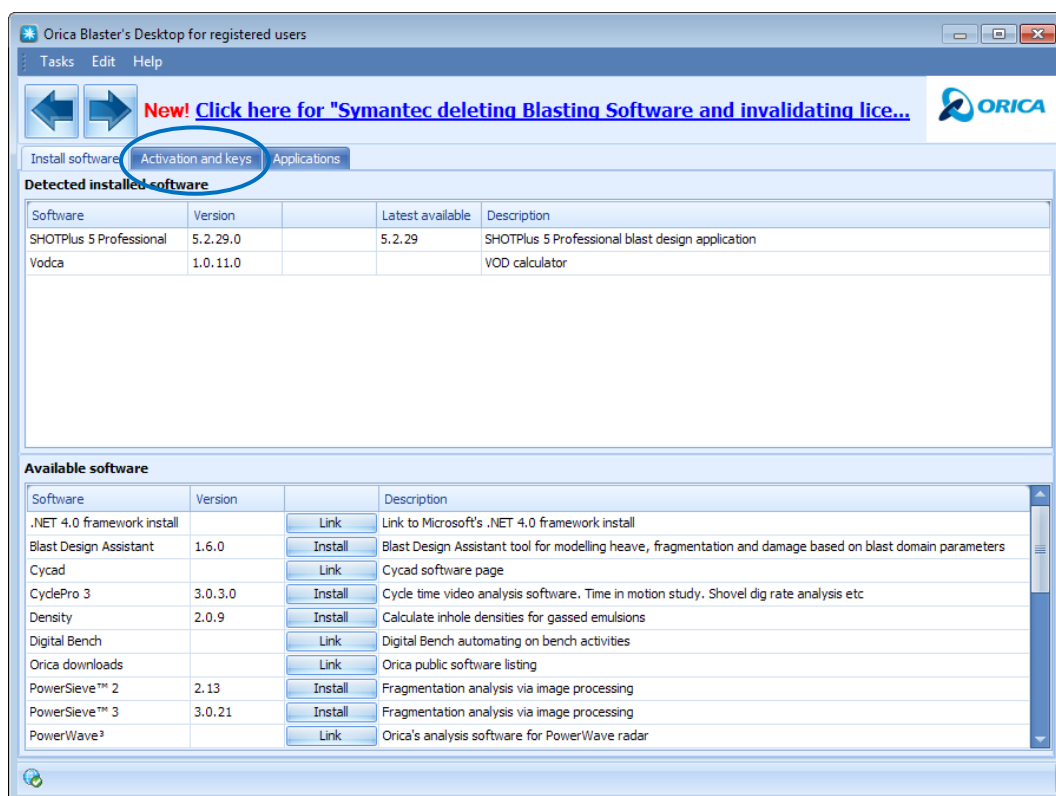
Return to *Blaster's Desktop*.

9. Select **Close**.



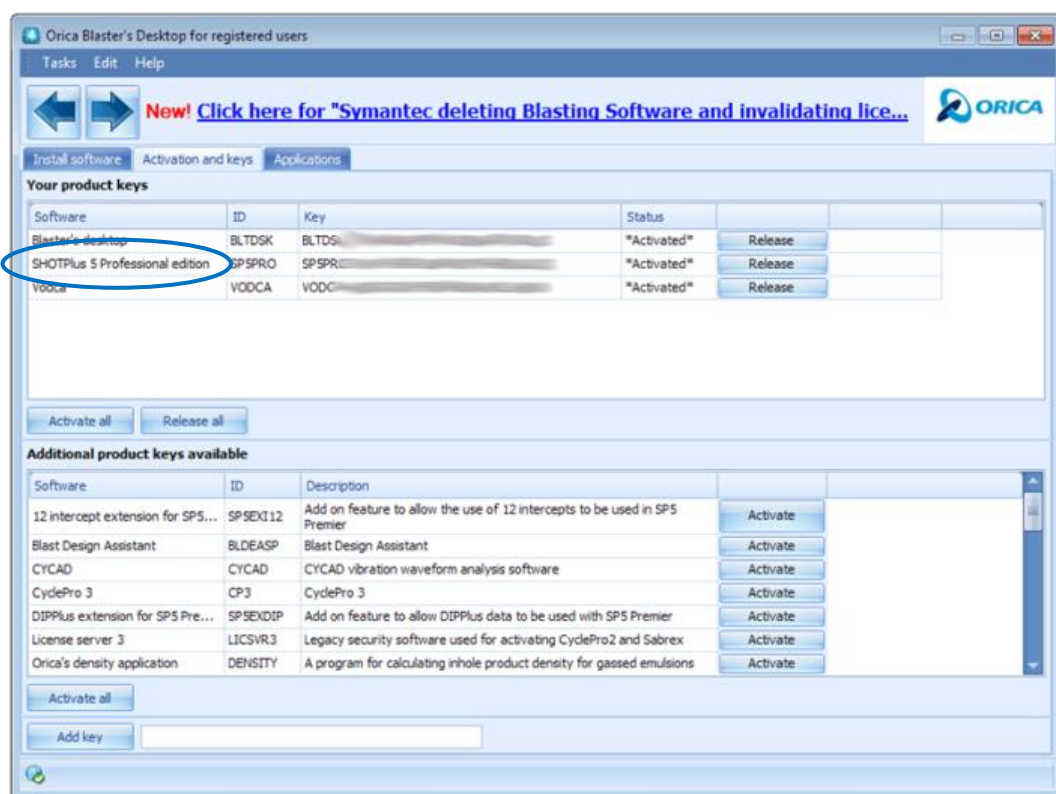
SHOTPlus 5 Professional will now appear in the *Detected Installed software* list.

Detected installed software				
Software	Version		Latest available	Description
SHOTPlus 5 Professional	5.2.09.0		5.2.29	SHOTPlus 5 Professional blast design application
Vodca	1.0.11.0			VOD calculator

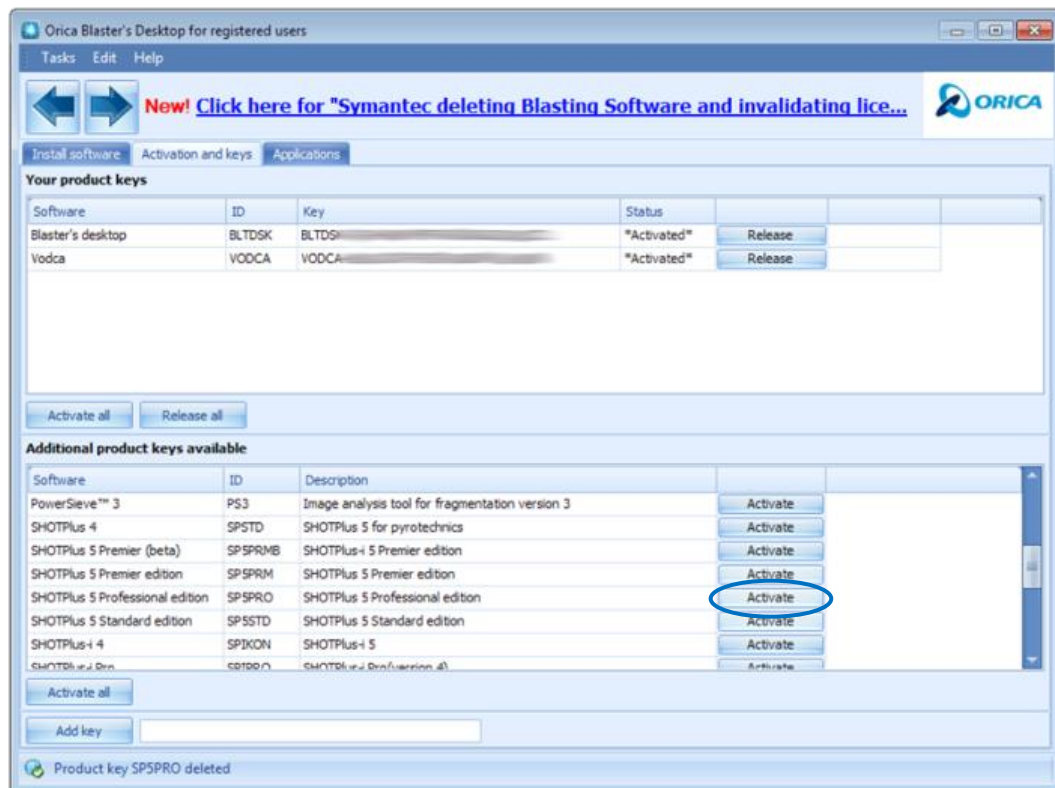
10. Select the **Activation and keys** tab.

If *SHOTPlus 5 Professional edition* appears in the *Your product keys* section, installation is complete and SHOTPlus 5 is ready to use.

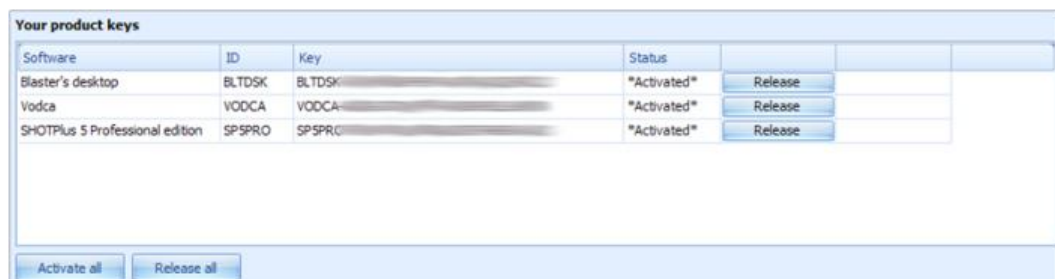
If *SHOTPlus 5 Professional edition* does not appear, continue from Step 11.



11. Scroll down until SHOTPlus 5 Professional edition appears in the Additional product keys available section.
12. Select **Activate** (beside *SHOTPlus 5 Professional edition*).



SHOTPlus 5 Professional edition will now appear in the *Your product keys* section.

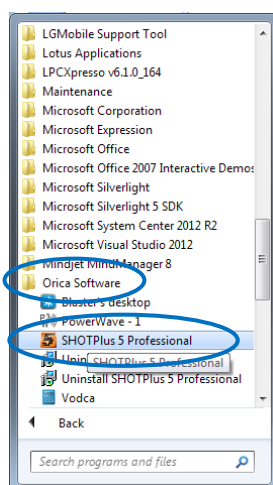


SHOTPlus 5 is now ready to use.

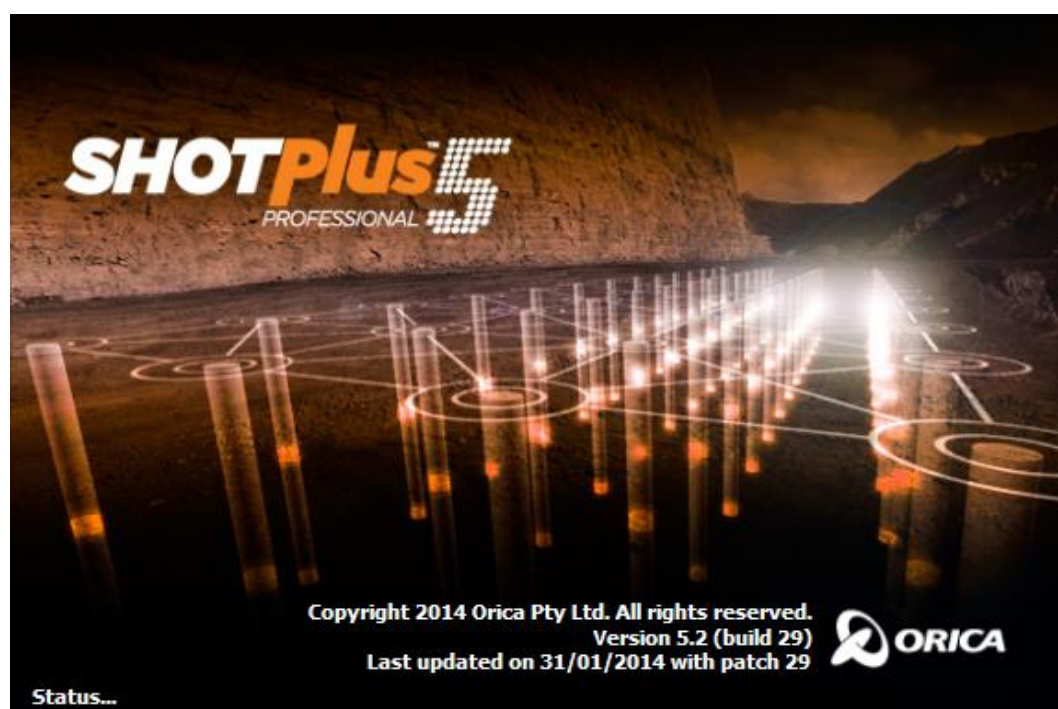
13. Exit from *Blaster's Desktop*.

10.4 RUNNING SHOTPLUS 5 FOR THE FIRST TIME

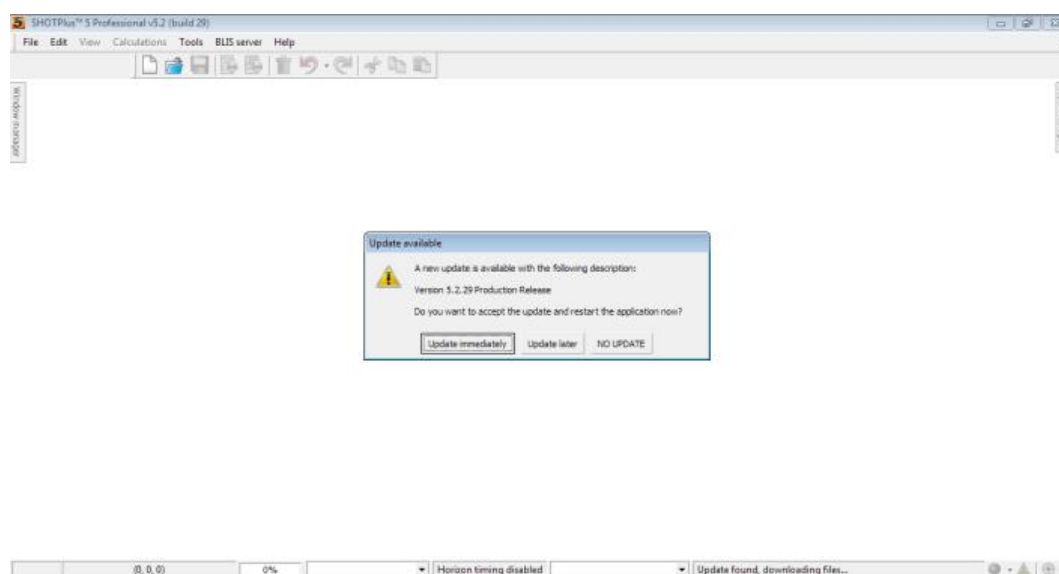
1. Select **All Programs / Orica Software / SHOTPlus 5 Professional**.



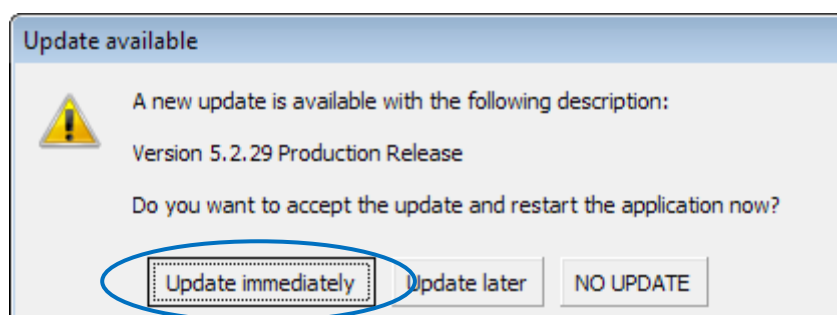
The SHOTPlus 5 Start up screen displays.



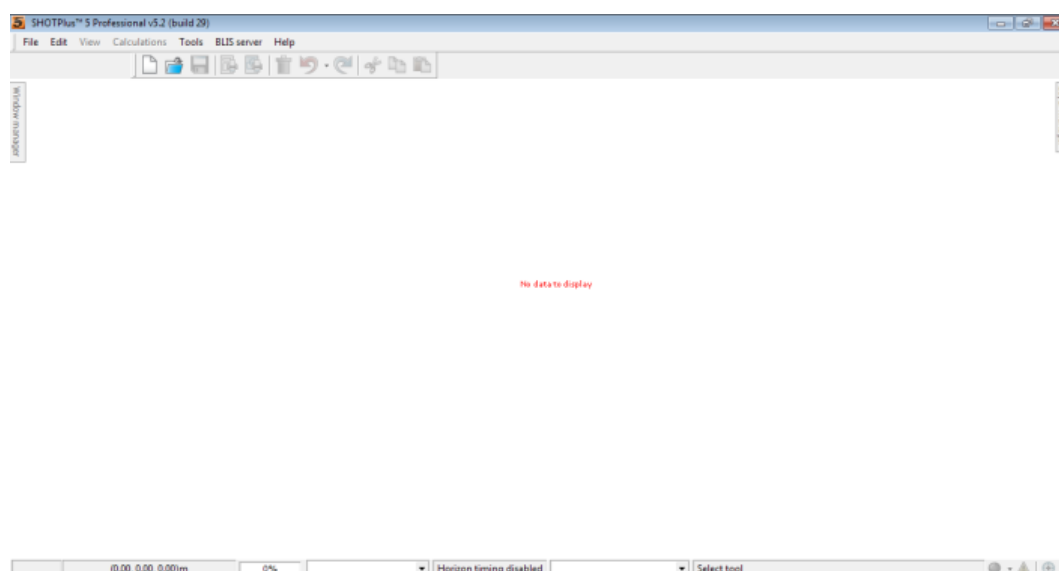
After starting *SHOTPlus 5*, you may be prompted to install an update.



2. Select **Update immediately** (refer to *4.6 Installing SHOTPlus 5 Updates* for further information).



SHOTPlus 5 is loaded and ready for use.



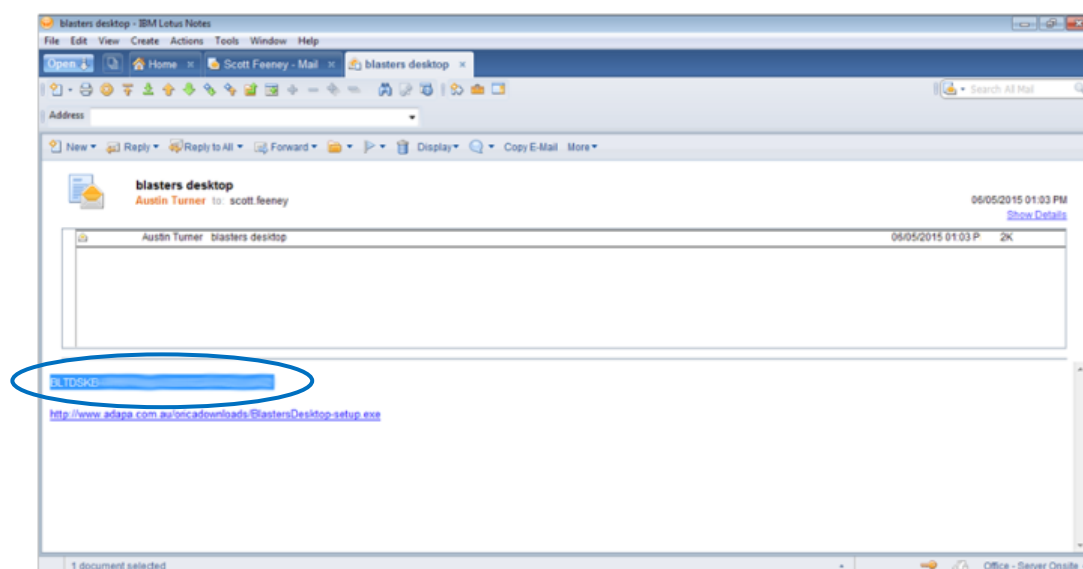
10.5 INSTALLING BETA SOFTWARE FOR TESTING

Installing the beta version of the software allows a select group of users to evaluate software prior to general release. Beta software users play a vital role in development, providing suggestions and identifying errors in the code.

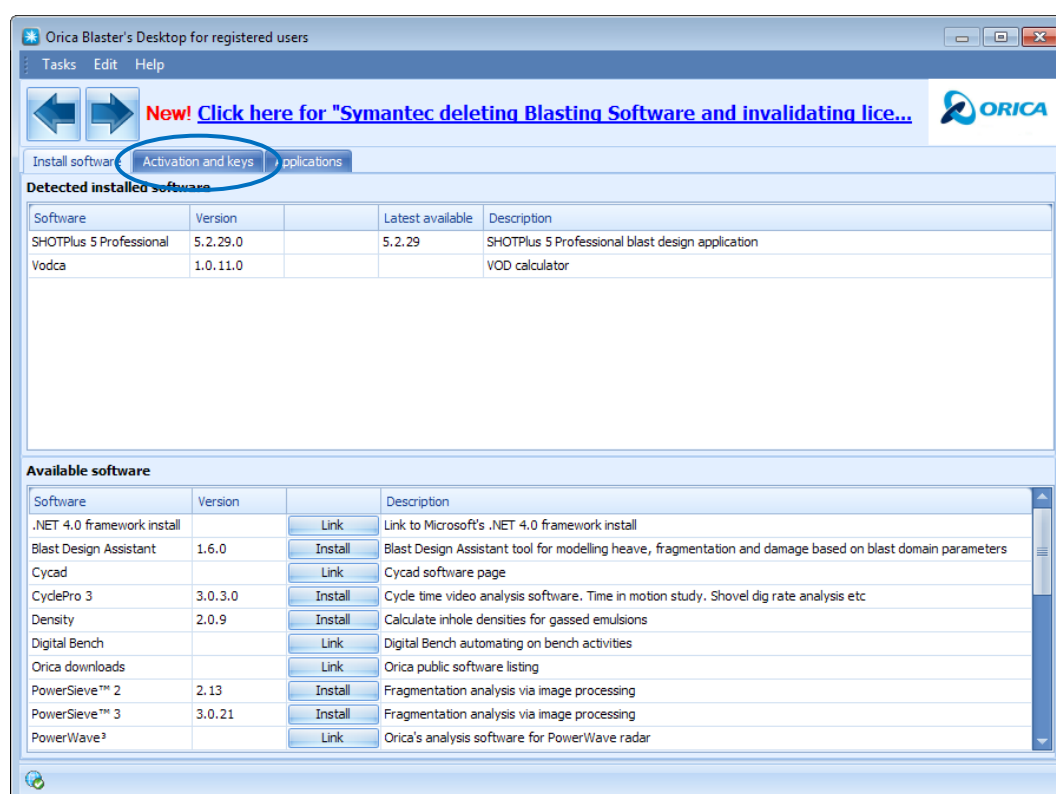
To install beta versions of software, *Blaster's Desktop (beta)* must be downloaded first.

Users selected as beta software users will receive an email from the system administrator.

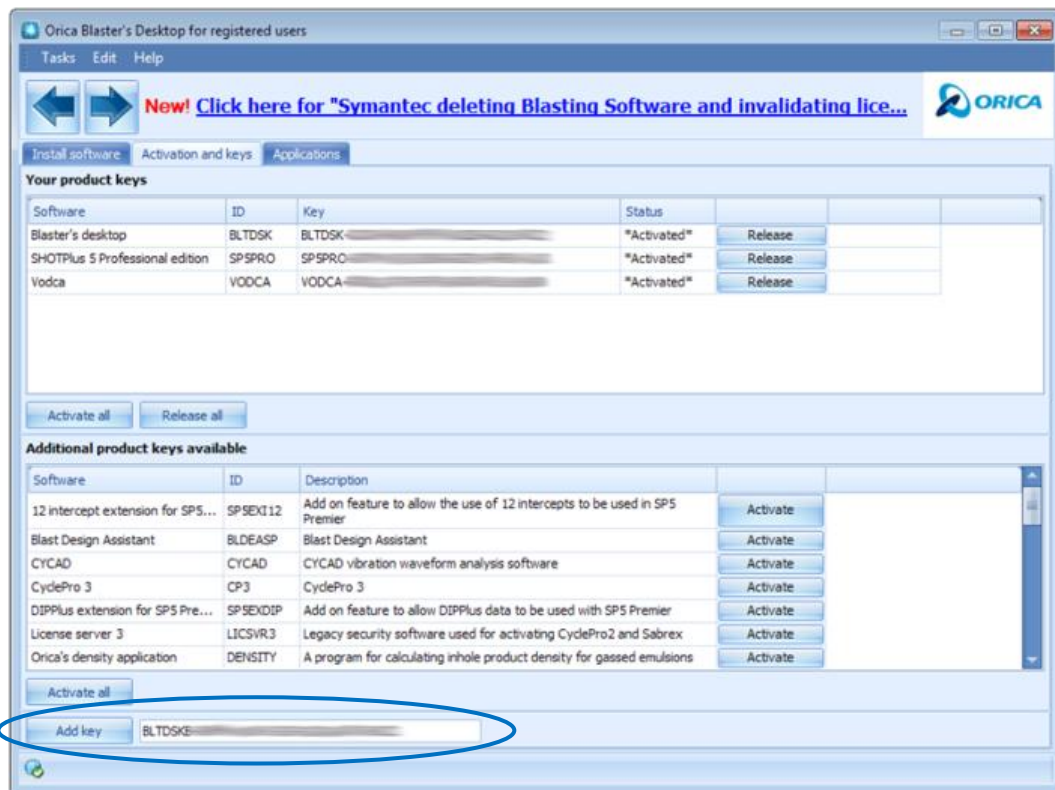
1. Copy the **key** from the email.



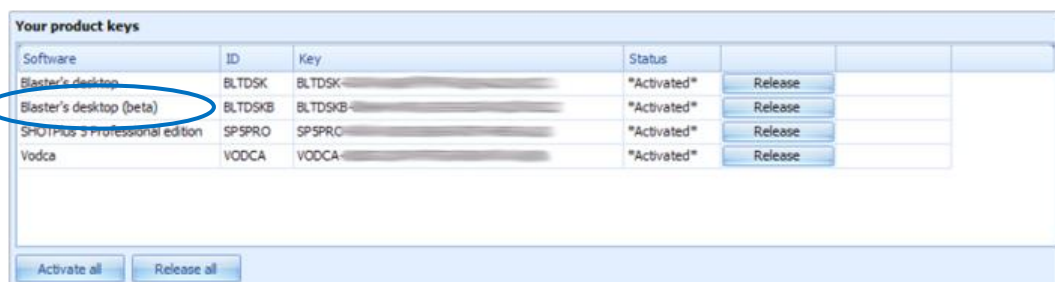
2. Open **Blaster's Desktop** using the desktop shortcut.
3. Select **Activation and keys**.



4. Paste the **key** in the field beside **Add key**.
5. Select **Add key**.



This action adds the beta version into the **Your product keys** area.




After installing the beta version of *Blaster's Desktop*, the other beta versions of software are now available.

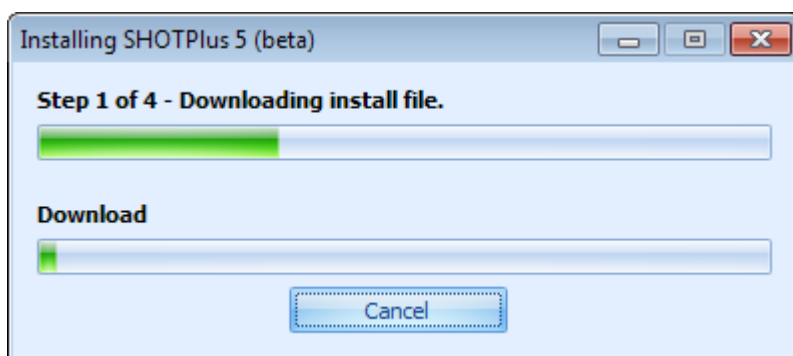
-
- The screenshot shows the Orica BlastPro 3 software interface. At the top, there is a menu bar with 'Tasks', 'Edit', and 'Help'. Below the menu bar, there is a navigation bar with 'Install software', 'Activation and keys', and 'Applications'. The 'Install software' button is highlighted with a red circle. Below the navigation bar, there is a section titled 'Your product keys'. This section contains a table with columns: Software, ID, Key, Status, and Release. The table lists several products, including 'BlastPro 3', which is highlighted with a red box. The 'Release' button for 'BlastPro 3' is highlighted with a red arrow. Below the table, there are buttons for 'Activate all' and 'Release all'. At the bottom, there is a section titled 'Additional product keys available' with another table listing products like '12 intercept extension for SP5...', 'Blast Design Assistant', 'CYCAD', 'CydePro 3', 'CydePro 3 beta', and 'DIPPlus extension for SP5 Pre...'. Each row in this table has an 'Activate' button. At the very bottom, there is an 'Add key' button and a text input field.
- Taskbar: Orica BlastPro 3 Desktop for registered users
- Menu: Tasks Edit Help
- Navigation: Install software (highlighted) Activation and keys Applications
- Section: Your product keys
- | Software | ID | Key | Status | Release |
|---------------------------------|---------|------------|-------------|------------------------------------|
| BlastPro 3 | BLTDSK | BLTDSK... | "Activated" | Release (highlighted with red box) |
| BlastPro 3 (beta) | BLTDSKB | BLTDSKB... | "Activated" | Release |
| SHOTPlus 5 Professional edition | SPSPRO | SPSPRO... | "Activated" | Release |
| Vodca | VODCA | VODCA... | "Activated" | Release |
- Buttons: Activate all Release all
- Section: Additional product keys available
- | Software | ID | Description | Activate |
|-----------------------------------|----------|--|----------|
| 12 intercept extension for SP5... | SPSEXI12 | Add on feature to allow the use of 12 intercepts to be used in SP5 Premier | Activate |
| Blast Design Assistant | BLDEASP | Blast Design Assistant | Activate |
| Blast Design Assistant (beta) | BLDEAS | Blast design assistant beta version | Activate |
| CYCAD | CYCAD | CYCAD vibration waveform analysis software | Activate |
| CydePro 3 | CP3 | CydePro 3 | Activate |
| CydePro 3 beta | CP3BETA | CydePro 3 beta | Activate |
| DIPPlus extension for SP5 Pre... | SPSEXDIP | Add on feature to allow DIPPlus data to be used with SP5 Premier | Activate |
- Buttons: Activate all Add key

7. Scroll down to *SHOTplus 5 (beta)* using the scroll bar.
8. Select **Install**.

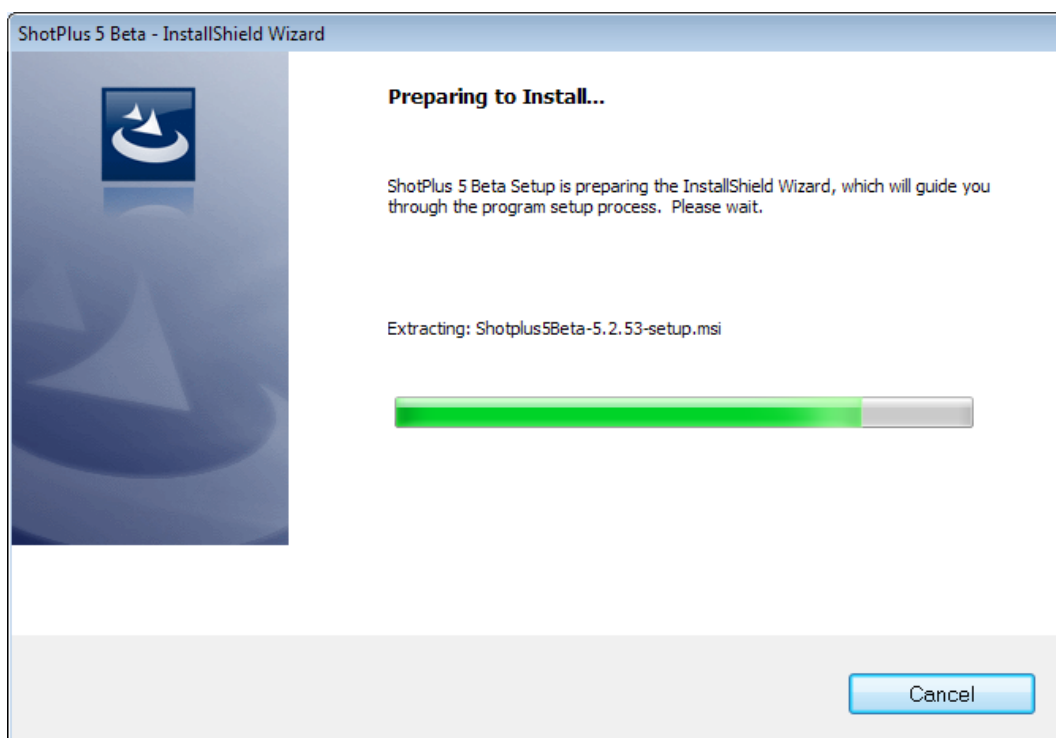
Software	Version		Description
Orica downloads		Link	Orica public software listing
PowerSieve™ 2	2.13	Install	Fragmentation analysis via image processing
PowerSieve™ 3	3.0.21	Install	Fragmentation analysis via image processing
PowerWave ³		Link	Orica's analysis software for PowerWave radar
SHOTPlus	4.88	Install	Timing and blast design software for pyrotechnic applications
SHOTPlus 5 (beta)	5.2.53	Install	SHOTPlus 5 blast design application which may be used with standard, i-kon, and Pro product Keys (BETA)
SHOTPlus 5 Docs	1.0	Install	SHOTPlus 5 development documentation and test files
SHOTPlus 5 Premier	5.2.29	Install	SHOTPlus 5 Premier blast design application
SHOTPlus 5 Premier (beta)	5.1.131	Install	SHOTPlus 5 Premier 5 blast design application (BETA)
SHOTPlus 5 Standard	5.2.20	Install	SHOTPlus 5 blast design application

- 
- Confirm installation
- Are you sure you wish to install SHOTPlus 5 (beta)?
- OK Cancel

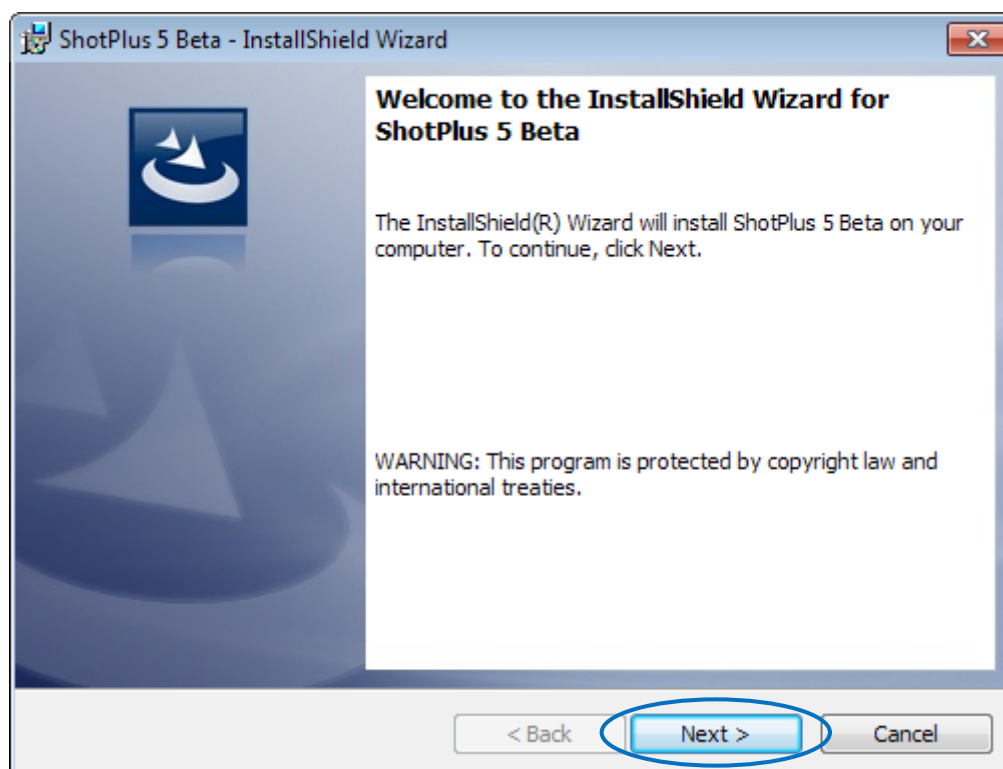
The SHOTPlus 5 beta version will be installed.



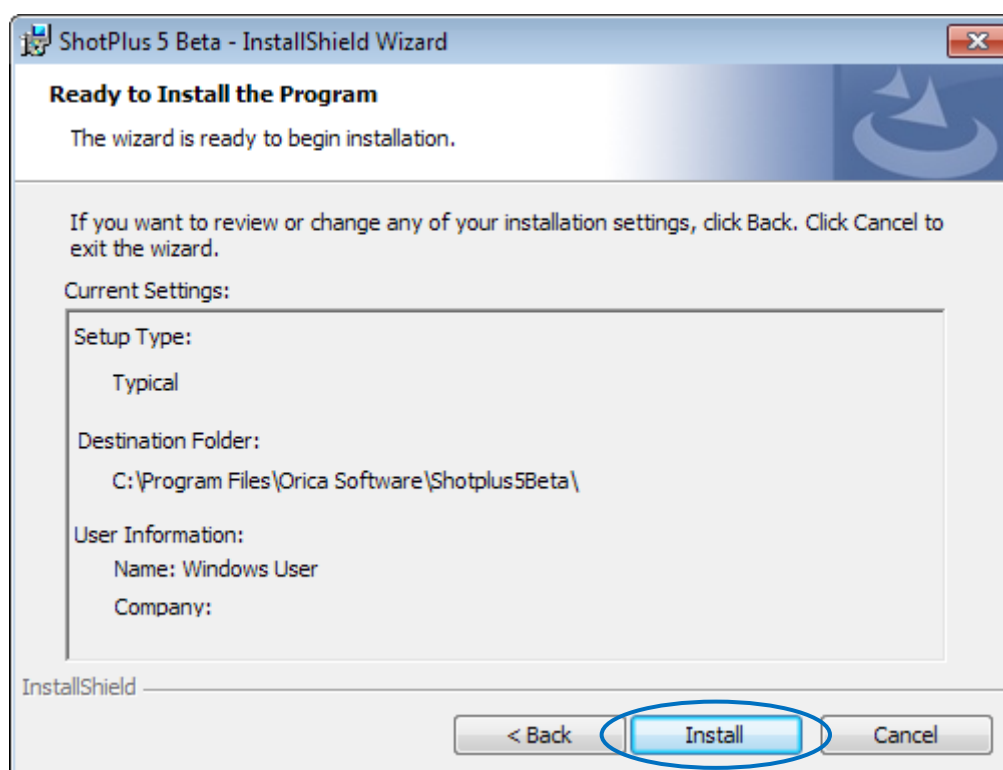
10. If presented with a user account control message, select **Yes**.
The *InstallShield Wizard* will begin the installation.



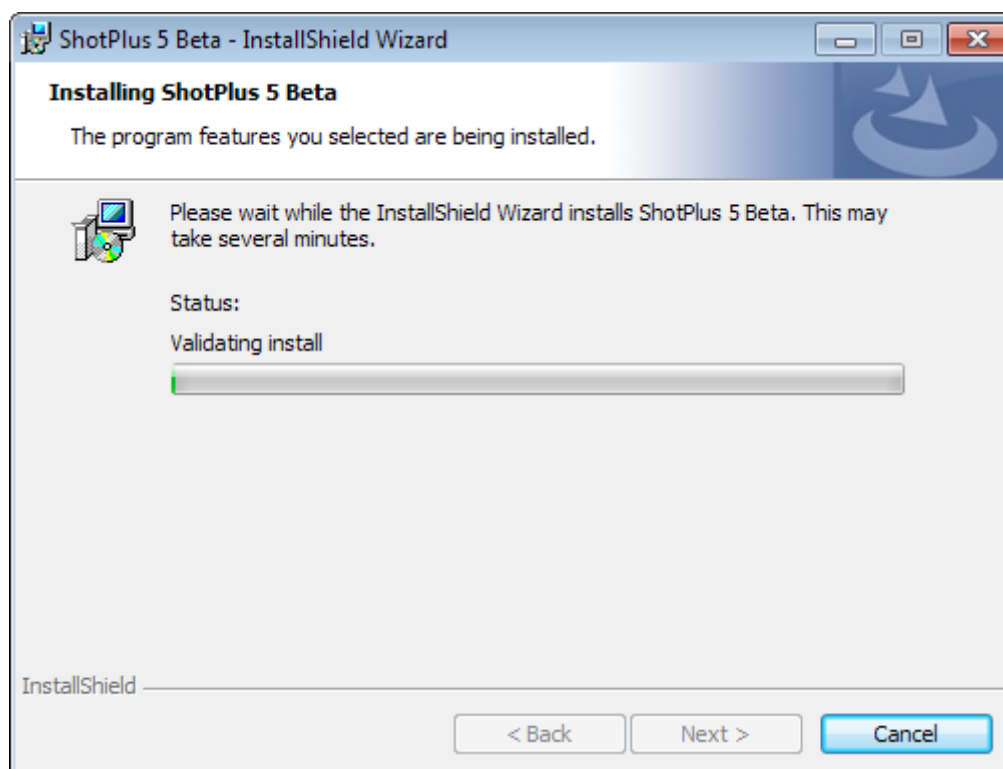
11. Select **Next**.



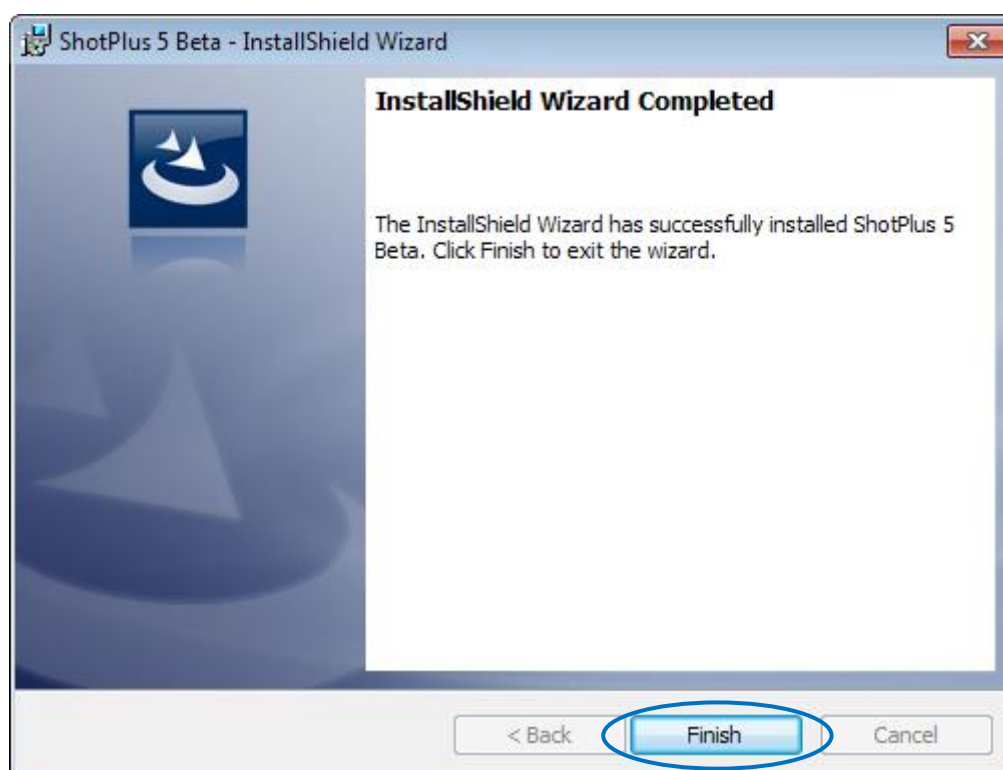
12. Select **Install**.



The *InstallShield Wizard* installs the software.

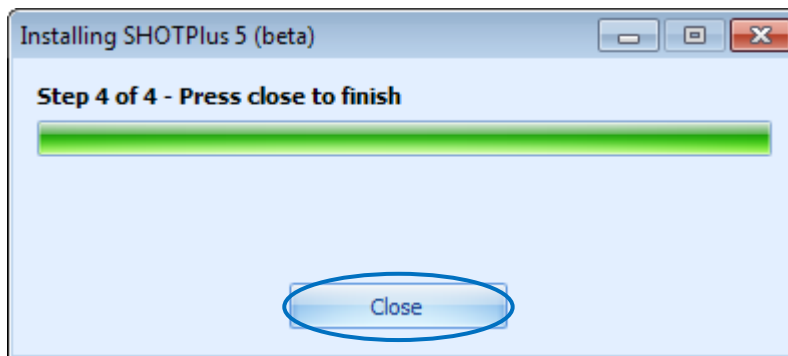


13. Select **Finish**.



The user is returned to *Blaster's Desktop*.

14. Select **Close**.

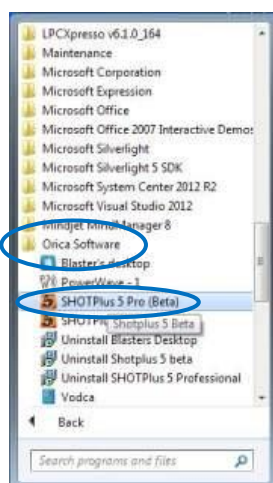


SHOTPlus 5 (beta) now appears in the **Detected installed software** list.

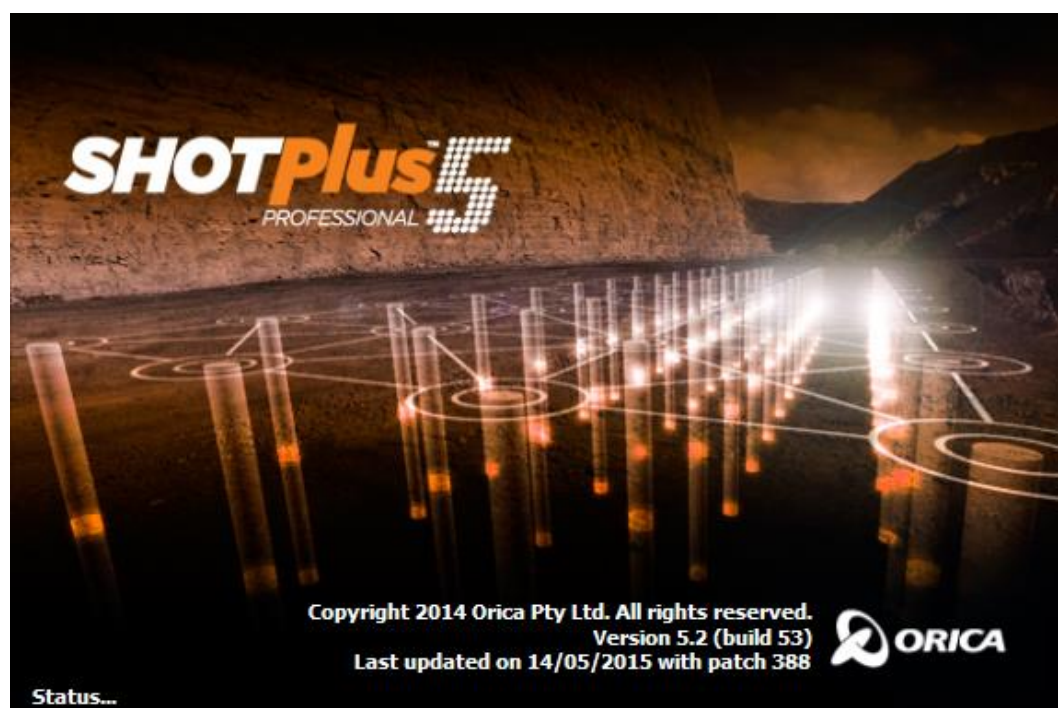
Detected installed software				
Software	Version		Latest available	Description
SHOTPlus 5 (beta)	5.2.53.0		5.2.53	SHOTPlus 5 blast design application which may be used with standard, I-kon, and Pro product Keys (BETA)
SHOTPlus 5 Professional	5.2.29.0		5.2.29	SHOTPlus 5 Professional blast design application
Vodca	1.0.11.0			VOD calculator

10.6 TO OPEN THE BETA VERSION

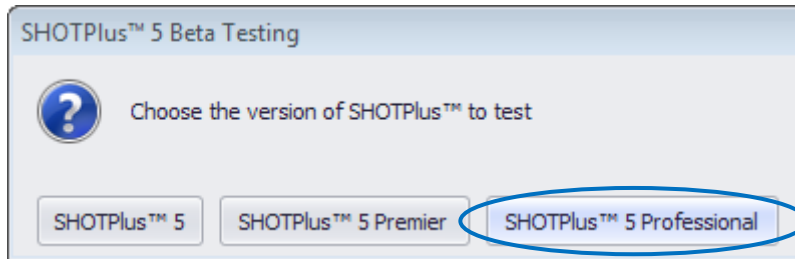
1. Select **All Programs / Orica Software / SHOTPlus 5 Pro (Beta)**.



SHOTPlus 5 loads.



Users operating as beta software testers can select to test *SHOTPlus 5* in standard, premier or professional grades. This box will appear every time the program is started.



SHOTPlus 5 will open in the chosen grade. A *Start-up Assistant* will appear.

