## Mike Sutton

## Case Study

**Video 1 - Drones for Forest and Fire Management video**

**Fire mapping**

1. How are drones useful for fire mapping?
2. What information do thermal cameras provide that regular drone cameras can't?

**Hazard reduction burning**

1. What is the process Mike and his team uses for hazard reduction burning?

**Boundary mapping**

1. What is an orthomosaic and how is it useful for boundary mapping?

**Compliance**

1. List some examples of areas that Mike and his team work to identify and protect within their managed forests.

**3D point cloud mapping**

1. What is a Photogrammetric point cloud and how is it useful?
2. Name two ways Mike and his team use this technology for mapping within forestry.

**MapApp**

1. Mike and his team created an app called MapApp. What can it do?
2. How is it useful?
3. What digital systems does it use and connect with?

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**Video 2 - The Digital Forester Podcast interview of Mike Sutton**

Watch the following segments, take notes, draw diagrams and answer the questions. Pause the video as required as you compile your case study.

**Video segment:** 2:39-7:13 (4:34)

1. How did Mike start in Forestry?
2. Where did he do his forestry degree?
3. What Australian states has Mike worked in?

**Video segment:** 8:39-16:23 (7:44)

1. What did Mike use for data collection in the field before computers were used?
2. When Mike started using technology, what did he use and what language was it programmed in?
3. Mike always strived to see how sustainable forest management could be done more efficiently. What are some of the ways he has done that with remote sensing technologies?
4. Mike works for Forestry Corporation of New South Wales. What does the corporation do and who owns it?
5. Mike mentions that the forests are mostly along the east coast of Australia, east of the Great Dividing Range due to higher rainfall areas. What different timbers can be found in those forests?
6. What is special about Eucalypt forests and their response to fires?

**Video segment:** 16:53-19:27 (2:34)

1. What technology did Mike say made the biggest impact on forestry management?

**Video segment:** 19:43-23:03 (3:20)

1. Mike mentioned Forestry Corp NSW’s work in performing ecological surveys for native forest planning and their need to be hierarchical in nature. None of the products on the market could do what Mike wanted. did his team end up developing and what was it used for?

**Video segment:** 23:04-28:04 (5:00)

1. What were the issues with the version 2 app which required it to be updated for version 3?
2. What additions have been made to improve version 3 of the app?
3. Where are the data stored?
4. What are the benefits of this decision?
5. Mike and Kevin discuss UI/UX and SDK. Describe what the abbreviations stand for.

**Video segment:** 30:13-31:25 (1:12)

1. What are the compliance documents that Mike talks about having to manage through Plan Portal, their Content Management System (CMS) and which agencies and users can view the various documents?

**Video segment:** 34:29-41:11 (6:42)

1. How does Mike and his team use LiDAR?
2. How has it been helpful?
3. What difference has LiDAR made to topographical mapping?

**Video segment:** 41:48-45:17 (3:29)

1. Describe Mike's journey with drones. How did he start and what was his process?

**Video segment:** 45:25-47:45 (2:20)

1. Draw a diagram to show how the DLoc app connects to show the location of the drone rather than the location of the iPad in the forest. Take a photo or screenshot and insert it below.

**Video segment:** 59:15-1:04:42 (5:27)

1. Mike talked about emerging technologies such as a ‘virtual plot’ and says we are nearly there using technologies such as LiDAR, VR technology, Hovermap and point cloud technologies. Explain what they are trying to achieve with the technologies.

**Additional notes from research:**