

10 STANDARD FIRE ORDERS
FIRE BEHAVIOUR

- Recognise current fire weather conditions and obtain forecasts.
- Obtain current information and regular updates on fire status.
- Initiate all actions based on current and predicted fire behaviour.

FIRELINE SAFETY

- Determine escape routes and safety zones.
- Establish lookouts in potentially hazardous or dangerous situations.
- Stay alert, keep calm, think clearly and act decisively.

OPERATIONAL CONTROL

- Remain in communication with your crew, your supervisor and all adjoining resources at all times.
- Ensure that instructions are given, are clear and are understood.
- Remain in control at all times.

Once ALL of these have been considered then one should...

10. FIGHT FIRE AGGRESSIVELY HAVING PROVIDED FOR SAFETY FIRST.

18 WATCH OUT SITUATIONS

- Safety zones and escape routes not identified.
- Terrain and fuels make escape routes difficult.
- Unfamiliar with weather and local factors affecting fire behaviour.
- Frequent spot fires occurring over the fireline.
- Uninformed on strategy, tactics and hazards.
- Instructions and assignments not clear.
- Fire not scouted or sized up.
- Constructing or working on fireline without a safe anchor point.
- Working a fireline downhill with fire below.
- Attempting a frontal assault on the fire.
- Cannot see the main fire and not in contact with anyone who can.
- Unburned fuel between yourself and the fireline.
- Weather getting hotter and drier.
- Wind increases and/or changes direction, also dust and/or fire whirls occurring.
- No communication link with crew members, supervisors or other resources.
- Working in an environment not seen in daylight.
- On a hillside where rolling material can ignite unburned fuel below.
- Sleeping near or on the fireline.

WILDLAND URBAN INTERFACE (WUI) HAZARD

The primary consideration is first to ensure fire-fighter and public safety. It is vital to assess potential fire behaviour, access and exit routes, hazardous materials, and available water supplies BEFORE engaging in the protection of any structures.

The first step in conducting a safe operation is to assess whether the firefighting operations can be conducted safely.

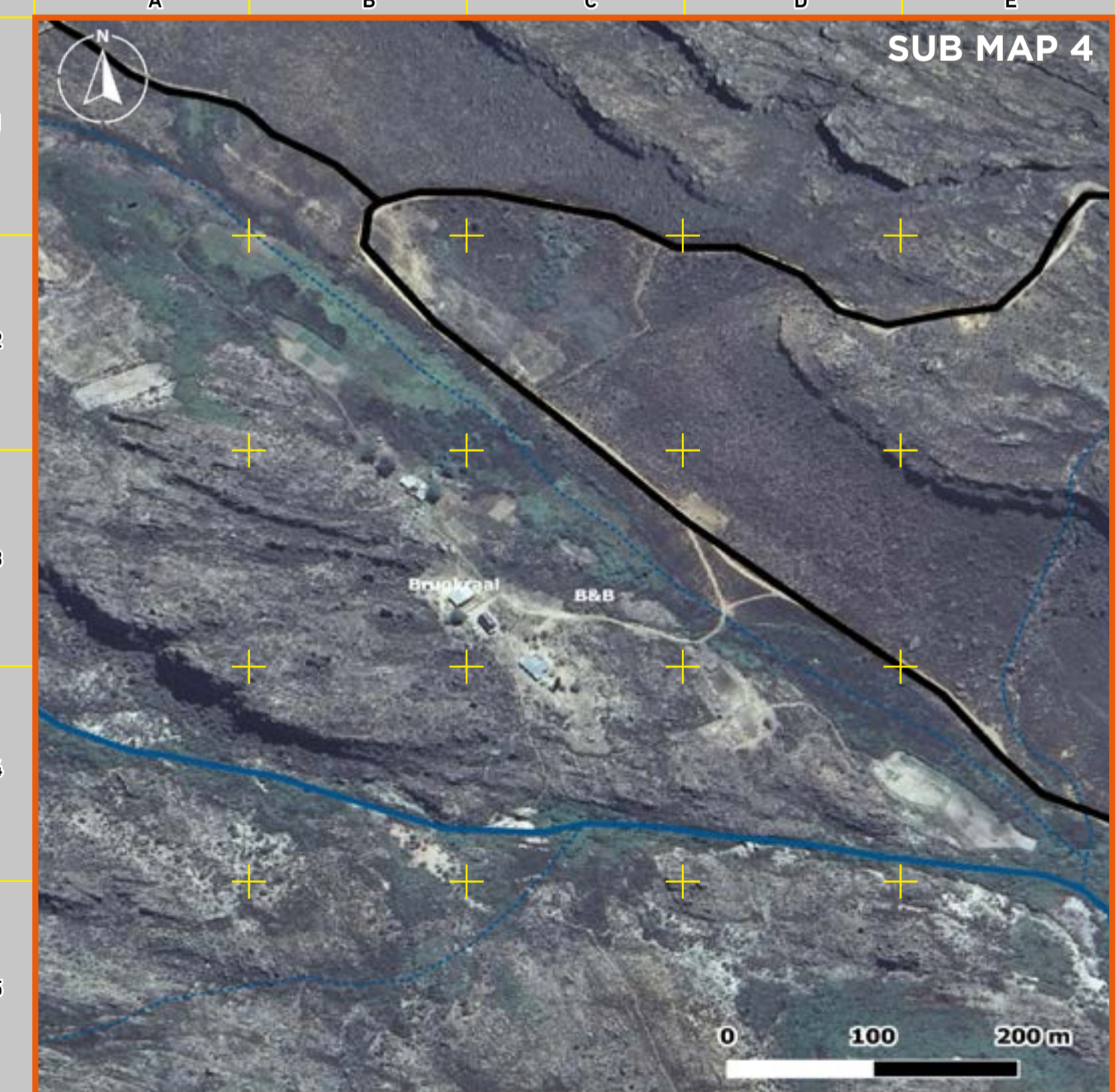
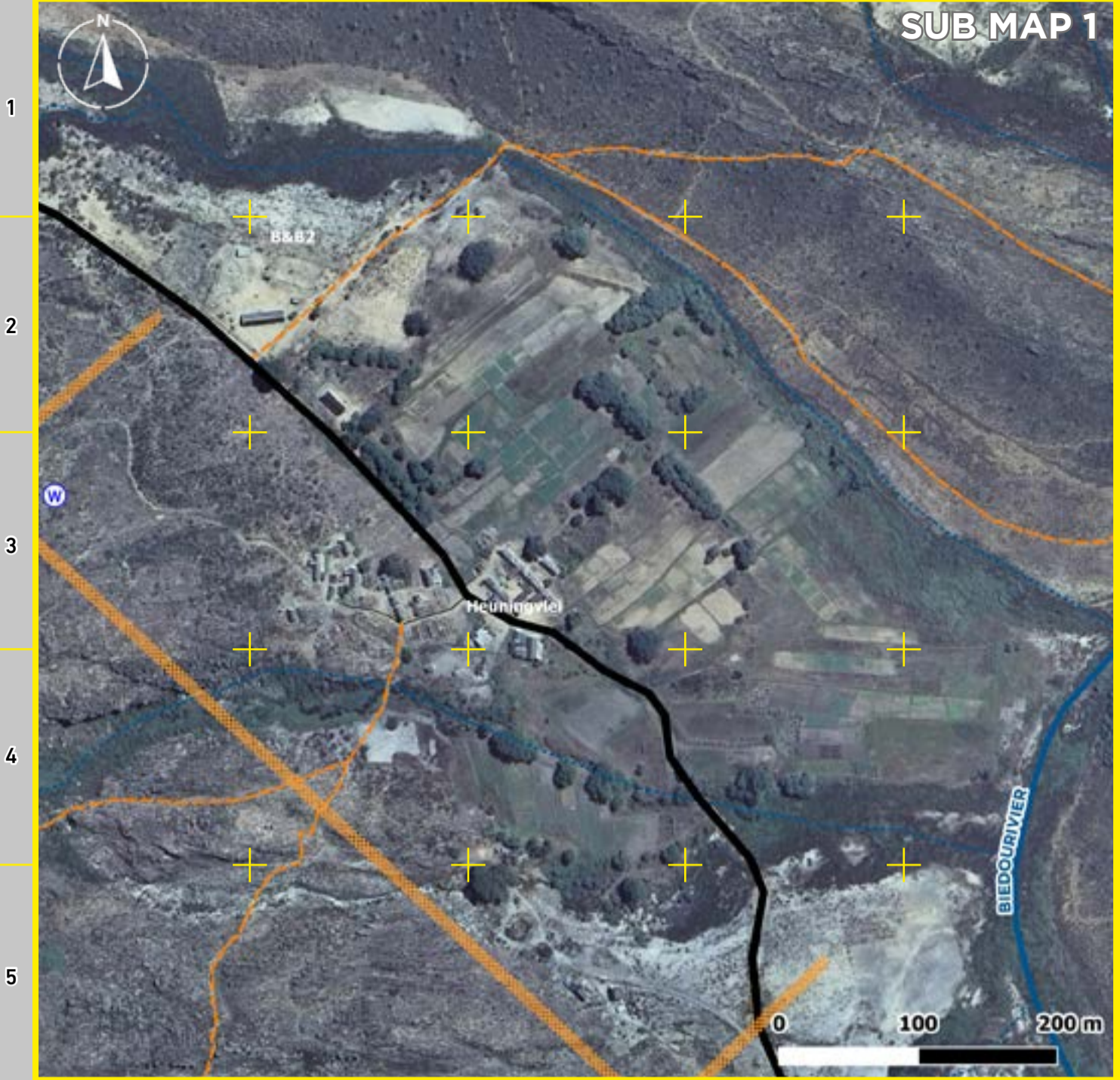
When completing a Risk Analysis of the Interface area, use the Wildland Urban Interface Watch Outs as an aid. There are three categories of structures.

Use Structure Triage to determine these.

- Those that are NOT at risk.
- Those that ARE at risk.
- Those that have already been lost or are too dangerous to protect.

WUI WATCH OUTS

- Poor access and narrow, one-way roads. A rapidly spreading fire could trap vehicles and personnel before they can turn around or move away from the flames and smoke.
- Observe Bridge limits. Exceeding bridge limits could lead to bridge collapse, resulting in blocking of access/exit routes. This could result in blocking an escape route and entrapments.
- Inadequate water supplies. Without a enough water available a fire can overtake an area before the fuels can be cleared away from the structure(s).
- Natural fuels are located 10m or closer to structures on level ground. Remember structures on slopes require a greater clear area.
- Structures located near the top of kloofs, chimneys or narrow valleys.
- Structures located mid-slope or on slopes of 30% or more with continuous flashy fuels.
- Extreme fire behaviour. This includes crowning fires, long flame lengths, spotting, rotating smoke plumes, fire whirls.
- Strong and/or gusty winds of 40km or more. Winds increase the chance of spotting and increase the pre-heating of fuels in the path of the fire.
- Evacuations. This can require fire personnel to leave fire suppression operations. This can also lead to distraction and the loss of situational awareness of responding personnel.
- Liquid Petroleum Gas (LPG) cylinders situated close to vegetation or other combustible materials.
- Power lines and poles. What is their location in relation to the structures? Watch for overhead and downed power lines.
- Local members of the public attempting fire suppression. Lack of knowledge in the public can lead to unsafe tactics and may compromise your fire suppression actions.
- Aerial Retardant and water bombing operations. Ensure communications are established with Air Branch and keep personnel and public out of the drop zones.



OPERATIONAL & SAFETY BRIEFING

- MISSION (COMMAND ORGANISATIONAL) CONSIDERATIONS**
- Command** - Incident Commander (IC) / Immediate Supervisor to establish Incident Command Post.
 - Establish contact with local Fire Protection Association - General Manager - Charl du Plessis on (079) 172 4340.
 - If Charl du Plessis is unavailable, contact the following Engela Celliers on (083) 603 3477 or Edrich Basson (076) 660 7540.
 - Incident Command Intent** - Always use the following to guide your priority for Strategy and Tactics.
 - 1) Life Safety, 2) Protection of Property, 3) Incident Stabilisation.
 - Leaders Intent** - Remember to brief your resources so they clearly understand what actions they must take to achieve objectives.
 - Leaders Intent must include - Task, Purpose and End State.
 - Specific tactical assignments** - Given out once the overall strategy has been decided on.
 - Use the **Briefing Checklist** in this Attack Plan or in your Incident Response & Fireline Safety Pocket Guide to ensure all required topics are covered.

- OBJECTIVES**
- Protect the lives of the responders and public always. **Life safety is always the highest priority.**
 - Protect residences and structures using aggressive perimeter control tactics **only when safe to do so.**
 - Plan for and develop potential Structure Protection Group(s) or Task Force(s) in order to:
 - conduct reconnaissance, prepare structures for defence, and assist as needed with protection and evacuation of citizens.

- GENERAL COMMAND CONSIDERATIONS**
- All fires (structural and wildfire) in the Cederberg and surrounding area fall under the jurisdiction of the West Coast District Municipality.
 - NOTE: Any firefighting response to the villages in and around Wuppertal will take a long time to arrive. Plans must already be in place for the communities to protect themselves in an identified Safety Zone within their village.**
 - The Cederberg Fire Protection Association is well managed but understaffed for fire response. They can supply a limited response of staff trained in basic wildfire response. The isolated communities in the Cederberg have limited to no Basic Wildfire Suppression training. External responders will have to manage any wildfire threat to any of the villages, **see list 'Possible Fire Suppression Resources below.**
 - Temporary Refuge Areas (TRA) should not be used in lieu of evacuation to a true Safety Zone. The IC may exercise the option to shelter residents in place or evacuate as the incident dictates.
 - It is likely that the villages will be isolated and cut off during a wildfire. Roads are also, at times, 4x4 only or unable to be driven.
 - There is only one main access road to the villages in the valley around Wuppertal and on the mountain plateau above Wuppertal.
 - Communications in the area were poor**, due to no Telkom lines and poor cell coverage. Radio coverage may be poor in some areas. It is suggested to set up repeaters at the earliest opportunity to ensure a good radio network across the valley.
 - There are a few people with satellite phones.
 - Water for consumption as well as fire suppression is supplied (gravity fed) from the mountain reservoirs, and can be compromised if a wildfire burns out the water tanks and pipes. Protection of water sources should be a high priority.

- REPORTING & CHECK IN**
- Report to the Incident Command Post (ICP) for Check-In with Planning (on ICS Form 211) on arrival at the incident.
 - Receive briefing from the relevant IC, Operations Section Chief (OSC) or Divisional or Group Supervisor.
 - Make sure you understand the objectives within the Incident Action Plan (IAP), as well as the intent of Incident Command.
 - Ask for a contingency plan in the event of the current plan failing.
 - Confirm the Strike Team, Task Force, Division or Group and the Supervisor you are assigned to and make contact with them.
 - Confirm preferred communication method (radios, cell phone, WhattApp group, etc.).
 - Confirm the length and beginning time of the Operational Period and Confirm required reporting intervals (SITREPs).
 - Ask what Hazards/Risks might be encountered and what Hazard areas exist. **Understand where they are on the maps.**

- STRUCTURE PROTECTION**
- First carry out a **Structure Triage** before deciding on attempting structure protection. Determine whether the structure can be protected.
 - The categories are: **Defendable (Stand Alone)** - determining factor - Safety Zone present, **Defendable (Prepare and Hold)** - determining factor - Safety Zone present, **Non-Defendable (Rescue Drive By)** - determining factor - NO Safety Zone present.
 - Electricity is by means of overhead power lines with some homes/structures using solar. Be aware some structures use LPG.
 - Structures are mostly wooden and there are many thatch roofs. The main risk of WUI fire is from ember attacks.**
 - If firefighters are in danger undertaking structure protection, they should withdraw. Ensure that residents have left, apply foams/retardants, and then leave the areas and return after the head of the fire has passed to extinguish any still burning fires.
 - Do Not use up all your water waiting down before the fire front arrives. Use for spot fires and ignitions after the fire front has passed.
 - Anyone considering defensive backburning, **must** get approval from IC prior to initiating the backburn.

- COMMUNICATIONS**
- CapeNature will likely create an incident-specific WhatsApp Group. **Note: Communication with the villages will be an issue.**
 - It is suggested to set up a repeater station for the Provincial radio cache, as communication will be a challenge.
 - Ensure all tactical, command, air-to-ground frequencies, cell phone numbers, etc. are shared.
 - Responding organisations are to maintain their own communication system amongst their own resources and then link to ICP.

- RISK MANAGEMENT**
- Identify known and expected hazards and risks and make them known to your personnel and the other resources alongside you.
 - Use the Go/No-Go Risk Management decision-making process when determining taking actions.

- GENERAL SAFETY**
- Brief personnel on Safety when deploying, when engaging and when changing tactics. Use the **10 Standard Orders, the 18 Watch Outs and LACES (Lookout, Awareness, Communications, Escape Routes and Safety Zones)**. Available on this Attack Plan.
 - Keep hydrated (the Cederberg gets extremely hot), watch other personnel and crew members for signs of **hyperthermia** (heat) during the day (as well as fatigue) and **hypothermia** (cold) at night.
 - Watch for indicators of problem fire behaviour and problem fire weather. Make these known to others as soon as they are noticed.
 - Identify and communicate **Trigger Points** for disengagement or reevaluation of the operational plan.

- SITE AREA HAZARDS**
- Ingress and egress pose critical complications of road congestion for firefighters especially as many roads are currently difficult to pass, due to the wide spread storm damage.
 - Movement around an area of fire will be a challenge due to state of roads and the distances between villages.
 - Safe areas for firefighters and civilians are available. These will change depending on the location of the area of fire and what agriculture is in place in the fields, and may well require a **shelter in place** as the only option. Check with the IC or Safety Officer for where current Safety Zones have been identified.
 - Be aware of the danger that ember storms and spot fires pose for entrapments, as well as fire spread into the WUI.

- WHEN TO GET OUT!**
- When the fire is making sustained runs and you have **inadequate defensible spaces** based on the length of the observed flames.
 - When your **water supply is limited** and will not outlast the potential fire threat. Rather be cautious, be safe, pull out and then re-engage when conditions are favourable.
 - When **multiple spot fires occurring** with more spot fires than can be easily suppressed.
 - When increasing fire intensity means you are **struggling to contain** the area of fire.
 - When you can no longer ensure compliance with any of the LACES.

AREA SPECIFIC COMMAND CONSIDERATIONS

- DEMOGRAPHICS**
- The communities across the Wuppertal region (roughly 34,000 Hectares in size) can be summarised as being predominately a lower income working community. Subsistence farming and farming of Rooibos are widespread. This farming is a crucial income for the communities and should be protected if possible. There are few Firebreaks around the farming land.
 - The community is predominately made up of elderly, and those of a working age with children who attend the local school.
 - The villages that house these communities are widely spread and can easily become isolated or cut-off during a disaster.
 - Most cooking is carried out by use of exterior or interior fire places.
- STRUCTURES**
- Structures in the communities are stone or brick, with some wooden and majority thatch roofs, and separated by low walls or fences. The majority of structures consist of single-family residences, a primary school in Wuppertal, and church buildings, interspersed with vacant plots or cultivated fields forming part of a Wildland Urban Interface mostly at risk from burning embers. It must be noted there are Heritage Buildings that will be vulnerable to wildfire hazards and fire spread risk. These are indicated on the map.
 - The majority of structures have loose lying fuels around them (wooden crates, wood piles, etc.) and are at risk from ember attack and spot fires causing fire spread.
- FENCES AND GATES**
- There are no major fences that would restrict suppression activities.
 - There are a number of gates between communities, these are not locked and are to keep livestock in place.
 - The entrance gate to CapeNature land from Hueningvlei is locked, and CapeNature must be requested to unlock this.
- ACCESS AND EGRESS**
- All roads apart from the road from Clanwilliam to Wuppertal are 4x4 access only.**
 - Roads can be affected by storm damage. **At the time of this plan, several roads are serious 4x4 only or inaccessible. See on map.**
 - Access in many places have medium to dense vegetation alongside them and will be a hazard during a wildfire if fire is moving through the area.
- FUELS**
- The fuels comprise a of fine fuels in the mountains, made up mostly Fynbos, with denser fuels including invasive aliens, in the river courses.
 - The FuelBreaks or Firebreaks surrounding villages are overgrown and will carry fire.
 - Stands of trees and tall shrubs are present in Wuppertal. Refer to the maps to identify where these are.
 - The fine flashy fuels will easily carry fire, especially in hot, dry and windy weather conditions. This should be considered when selecting locations for ICP, Staging Areas, Temporary Refuge Areas (TRA) and Safety Zones.
- TOPOGRAPHY**
- The villages exist on plateau on themountain ridge line and in the valleys below this.
 - The valleys and rocky outcrops will affect the local winds during a fire and un-expected wind shifts must be planned for.
- WEATHER**
- The predominant winds that contribute to the increased risk in the two areas are as follows:
 - The **South Easterly** as this will drive fires across the island and towards the roads that are frequented by the tourist buses as they travel around the island.
 - The **North Westerly** as this will drive fires into the village and prison area. These are usually pre-frontal winds and history has shown that these winds can be devastating.
 - PLEASE NOTE: If the above wind direction changes are noted, inform all concerned immediately, as there is a potential change in fire behaviour.
 - The communities on the higher lying areas will be more exposed to predominant wind conditions whereas the communities in the valleys will be subject to interference from the topography.

- WATER SOURCES**
- Hydrants/Water Points - the Hydrants/Water Points are all indicated on the maps.
 - Reservoirs/Dams - There are NO reservoirs or dams available for fire suppression operations at the time of the plan being written.
 - Water Bodies for aerial firefighting - these are outside of the area of the main map and will involve long turn around times. The most suitable locations are indicated in the Helicopter Water Points list on the main map, as well as their respective GPS coordinates for Bambi Bucket water pickup.
- EVACUATION CONSIDERATION**
- Should the IC decide to order an "evacuation" or "shelter in place" in a portion of the area, the following items should be considered:
 - It needs to be ORDERED EARLY and communicated clearly!
 - It is very likely that communities will not be able to or want to evacuate and will stay and defend or shelter in place.
 - Identify and use routes of travel for all vehicles only when safe to do so and consider the establishment of an Evacuation Group or an Evacuation Task Force.
 - Assign a Public Information Officer (PIO), an assistant or a fire services representative who has experience in Public Relations to contact the Opsier at each Community under threat. **NOTE: Telkom is often not working, you may not be able to contact the Opsier.**
 - Each community itself can be considered as the only Temporary Refuge Area or Safety Zone in that area. **there are TFA suggestions indicated on the maps.** Check with IC on the current choices. These must be large enough to accommodate large numbers of people without risk of radiant heat burns, and the vegetation in them (grass) must be wet down to stop fire spread. These areas can also be suitable for responders to shelter in.

- RESOURCE REQUEST LIMITATIONS & RECOMMENDATIONS**
- There is limited firefighting equipment at each community.** There are 2 x vehicle towed **water bowmers of 1000L** each in Wuppertal. Hydrants and hose boxes should be tested immediately on arrival. They may not have good pressure, or a hydrant key or be working. Many hose boxes are missing nozzles. There is limited firefighting equipment or firefighting PPE available to the communities.
 - The main fire response would come from West Coast District Fire Services.** The Station Officer on duty (24 hour shift) would instigate the response. **Control Centre phone is 022 433 8000.**
 - Immediate fire suppression should be carried out with all available aerial resources, weather dependent.**
 - Request assistance from external wildland firefighting organisations, such as the Working on Fire, Volunteer Wildfire Services or NCC.**

- COOPERATING ORGANISATIONS**
- West Coast District Municipality (WCDM), Greater Cederberg Fire Protection Association, WCPG - Fire Brigade Services, WCPG - Disaster Management, WCPG - Traffic Services, WCPG - Emergency Medical Services, South African Police Services, CapeNature (CN), Working on Fire, Volunteer Wildland Firefighting Organisations, local Community or Staff Firefighting Teams.

- POSSIBLE INCIDENT MANAGEMENT TEAM (TRAINED AND ACCESSIBLE POSITIONS)**
- 1 x Incident Commander (WCDM), 4 x Operations Section Chief (CN), 3 x Logistics Section Chief (CN), 4 x Planning Section Chief (CN), 1 x PIO (CN), 2 x Safety Officer (CN), 5 x Division/Group Supervisors (CN), 4 x Single Resource Leaders (CN).

IMPORTANT CONTACT PHONE NUMBERS

West Coast District Fire Services Control Centre	022 433 8000	Greater Cederberg Fire Protection Association	079 172 4340
CapeNature (CN) Algeria Office	082 453 3766	Clanwilliam Animal Welfare Society	082 806 3275
CapeNature (CN) Algeria Office	087 087 3968	Aerial Operations Frequency (West Coast)	123.35

AVAILABLE LOCAL FIRE SUPPRESSION RESOURCES

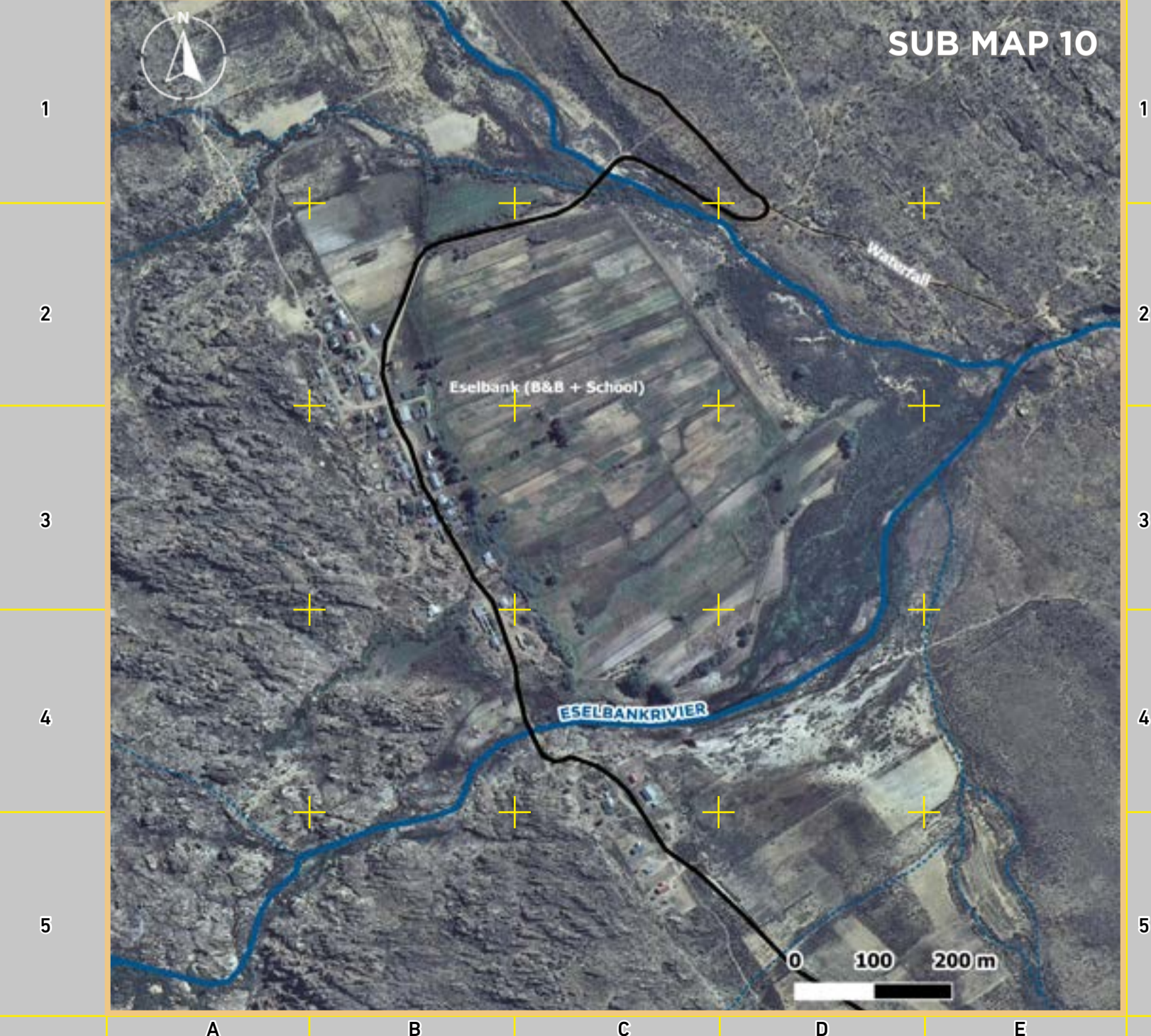
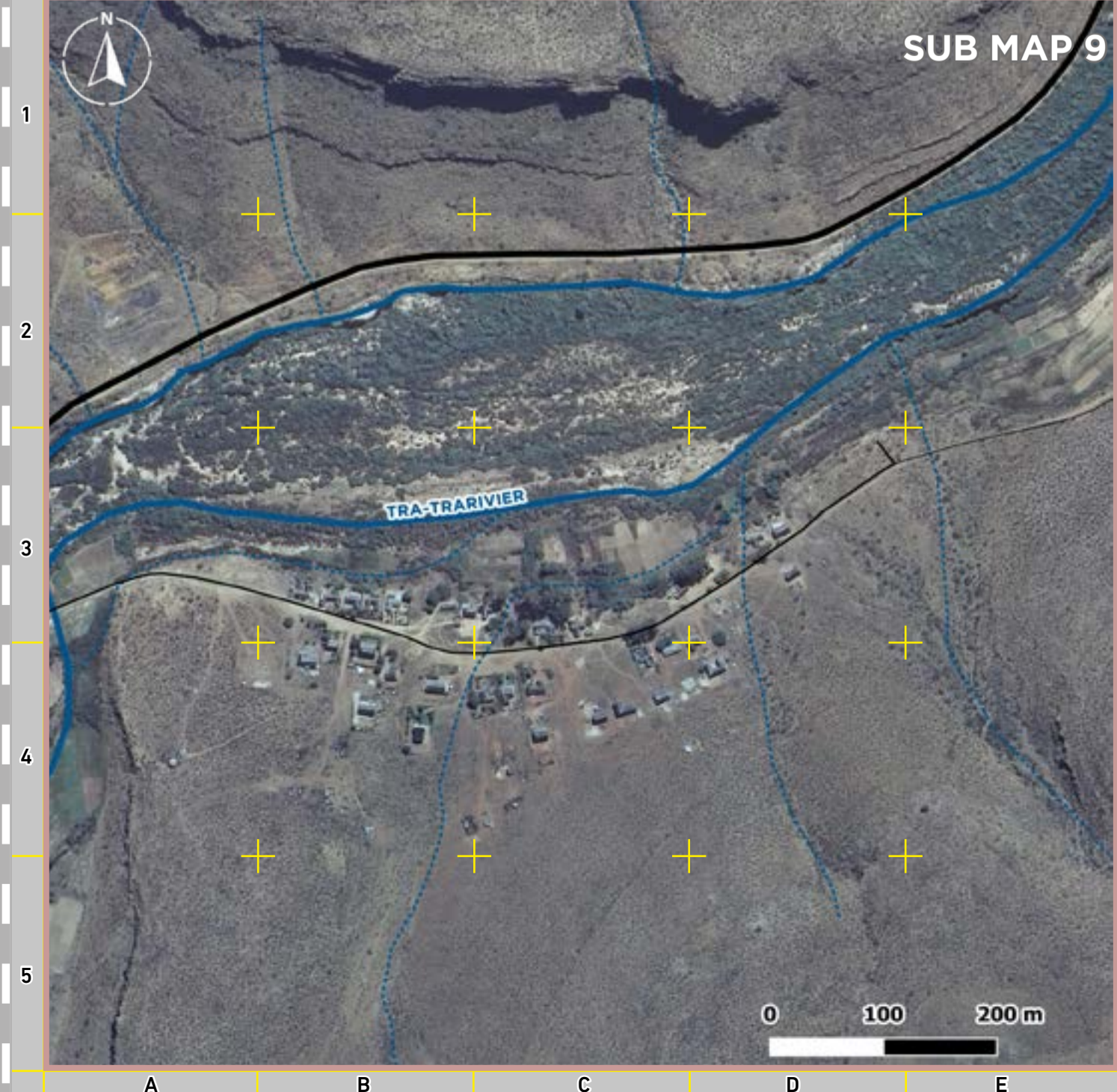
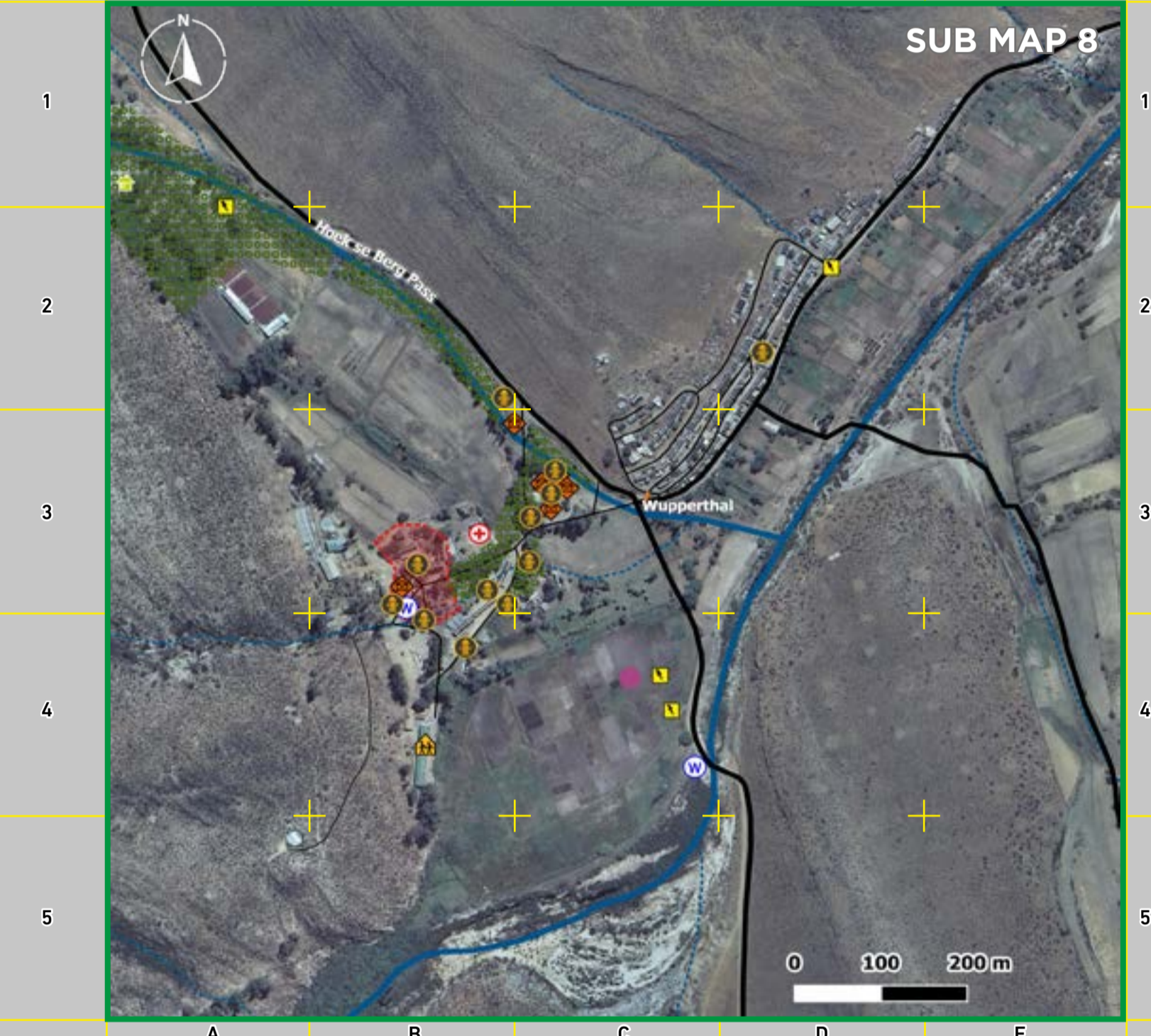
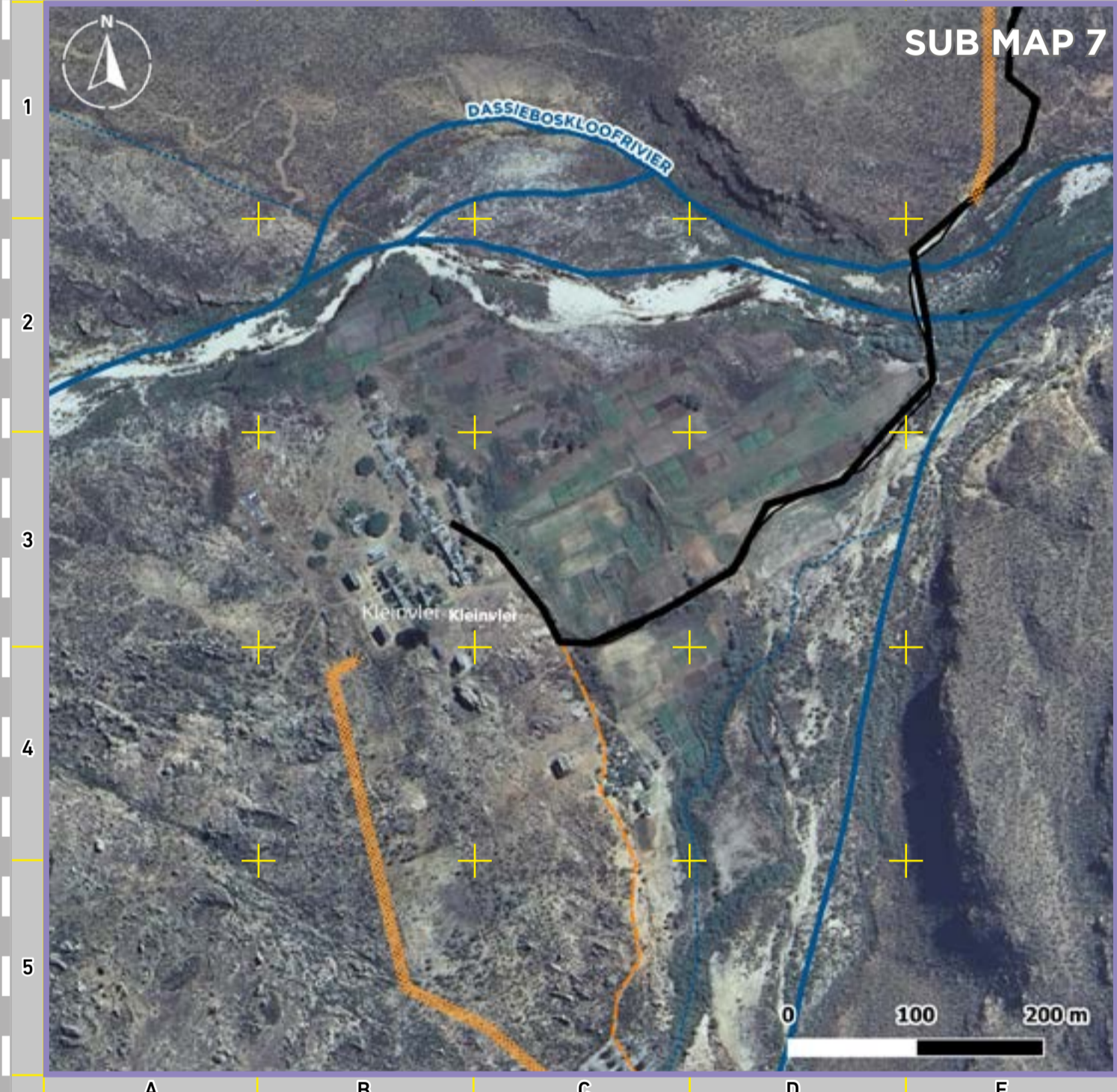
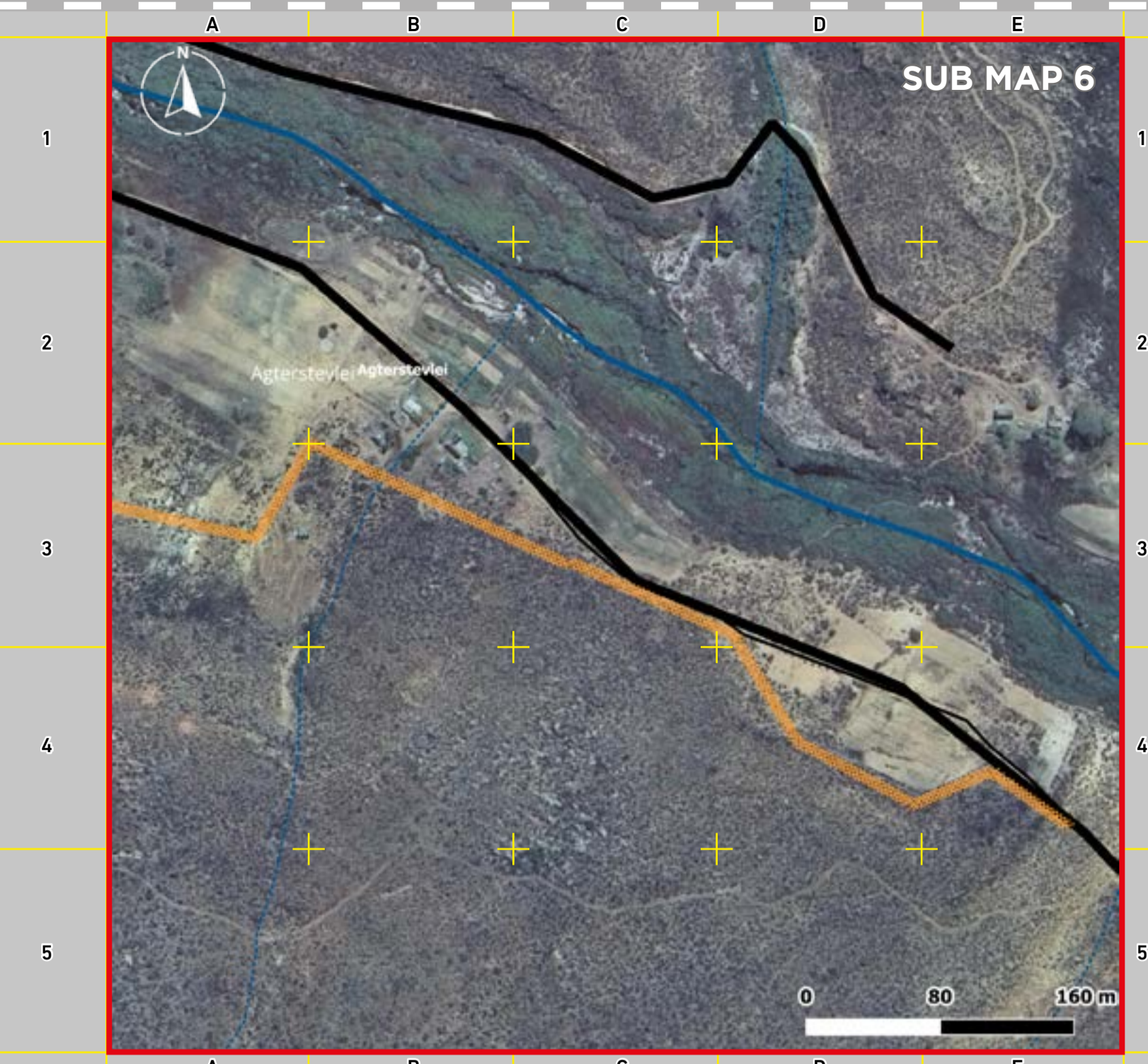
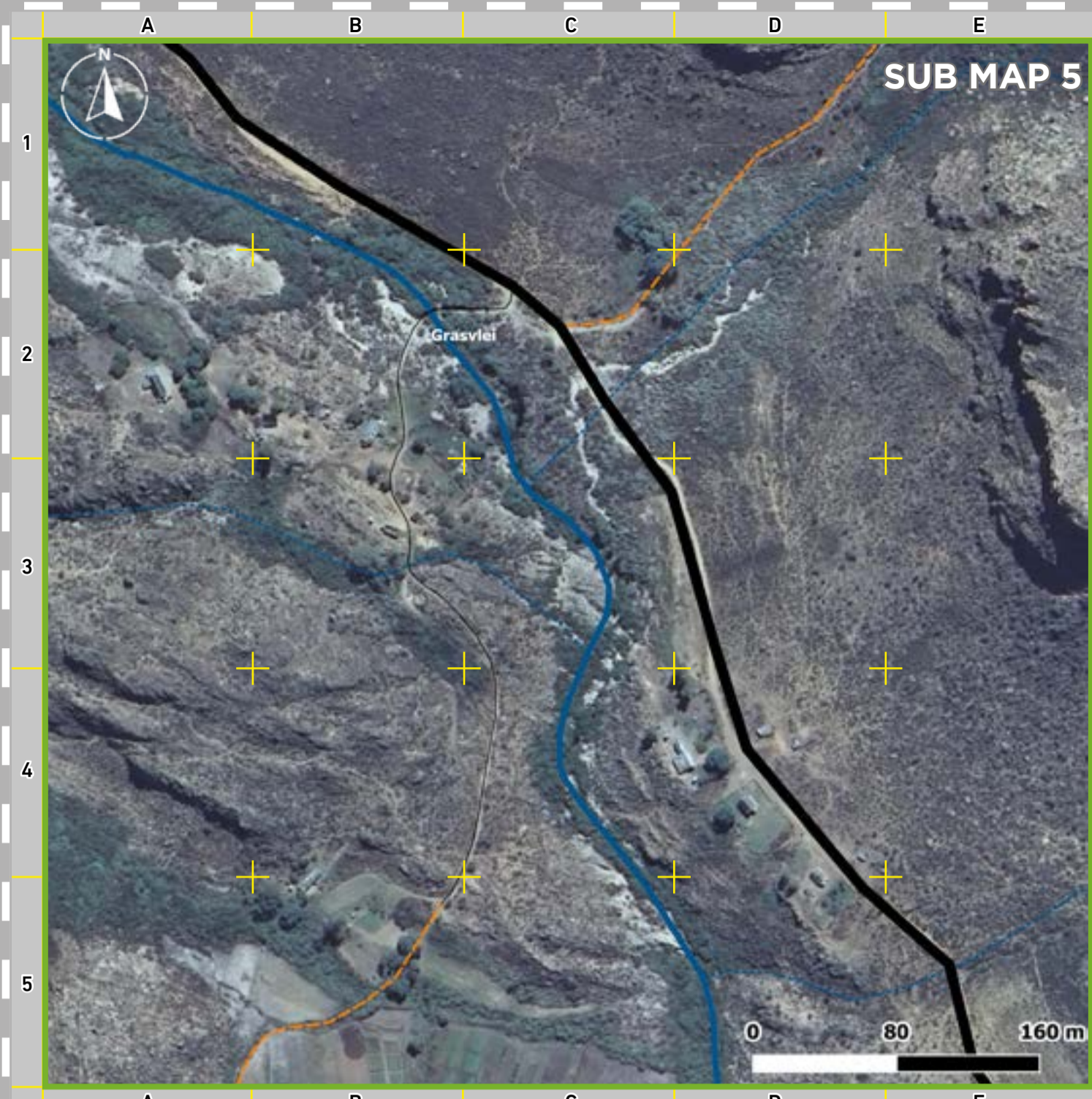
NOTE: Fire Management Unit Mobile Command is a Caravan complete with radios, chargers for radios, cell phones and maps of the whole valley.

Organisation/Farm/Village	Vehicles	Fire Beaters	Fire Rakes	Other	Trained Personnel	Capacity
CapeNature - Algeria	Bakkie Skid Units	/	/	/	?	600L x 2
CapeNature - Algeria	/	10	/	/	20	Ground Crew
Greater Cederberg FPA	Bakkie	/	/	Chainsaw x 2	/	(4x4) x 3 / (2x4) x 1
Greater Cederberg FPA	Truck	/	/	/	/	(2x4) x 1
Greater Cederberg FPA	Truck	/	/	/	/	2000L x 2
Greater Cederberg FPA	/	25	18	Chainsaw x 2	72	Ground Crew
West Coast District Municipality	/	52	/	Radios x 12	42	Vehicle Based
West Coast District Municipality	Bakkie Skid Units	/	/	/	-	600L x 10
West Coast District Municipality	Water Tanker	/	/	/	-	2000L x 3
West Coast District Municipality	Large Water Tanker	/	/	/	-	5000L x 1
Working on Fire	?	?	?	?	?	?

HELICOPTER WATER POINT
 W1 - 32°7'36.95"S, 19°9'13.89"E

	Possible ICP		Fire Hydrants		High Risk Structure
	Possible Staging		River (perennial / seasonal)		Powerline Crossings
	Possible TRA		Heli Water Points		Invasive vegetation thicket
	Clinic		Water Points		High-risk Areas
	School		Firebreaks		
	Road / Track		Possible Helispot		
	Footpath				
	4x4 Access		Runway		
	Turn Around				
	Bridge Single Lane				

Sub-Plan Areas



WUPPERTAL & SURROUNDING VILLAGES Wildfire Pre-Attack Plan

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