



# ***Field Supervisor's Manual 2008***

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## Objectives

The overall objective of this manual is to provide graduate students and other professionals supervising on NABO projects with a guide to basic principles and some potential solutions to the many challenges faced by all archaeologists as they try to cope with the daunting transition from being a good, hard working crew member to becoming an effective project director. Sets of skills and perspectives that made you a good (and promotable) crew member should not be forgotten, but you now need to acquire a whole new set of skills if you are to fulfill your new responsibilities. Since many good "how to dig" manuals and books exist, and since NABO/NORSEC projects usually make use of the FSI field manual to provide the best practice standard for most specific field problems, this short supervisors' handbook will focus on the special responsibilities of the field director and what we expect from you at this point in your career. It is based on several decades of our fieldwork experiences at all levels on many different projects<sup>1</sup>. It seeks to convey some of the things that "they don't teach you in grad school" and is intended both to help you progress professionally and also to clearly lay out what standards we expect to be consistently met by all our supervisors. Like any other archaeological project, this is the fruit of many hands and minds, and we welcome your input to improve this product.

## Responsibilities

*"With great power comes great responsibility" – Stan Lee, Spiderman Returns 1975*

Most diggers never become area supervisors, most area supervisors do not become site directors, and plenty of competent site directors never become fully formed "principle investigators" (PI's in NSF-speak) capable of raising funds and bringing projects to full scholarly publication. Thus you are in a special position, and you wouldn't be reading this if we didn't have faith in your good sense and judgment and a strong expectation that you will become PI's someday. This also means that you have been given special privileges and a serious career boost, and in many cases you will be doing work aimed at your own doctoral project funded by our project money. Most grad students will never enjoy these advantages (we didn't<sup>2</sup>) and of course nothing important is actually free<sup>3</sup>. We are extremely grateful for your hard work in field and lab, but you are now handling money, gear, and other people in ways that can permanently impact your professional reputation (and ours), and (most importantly) you are now in an excellent position to badly and irrevocably damage the already fragmentary archaeological record of our species if you screw up. You thus have heavy responsibilities to discharge<sup>4</sup>, and we know you will take these seriously. We

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<sup>1</sup> All of which taught lessons, some very positive and some very negative.

<sup>2</sup> And we are still bitter about it.

<sup>3</sup> Payback time!

<sup>4</sup> Welcome to the club. But don't tense up or you will certainly screw up. Relax as if your life depended on it.....



want you to succeed, but the bottom line for all of us always has to be the quality of the archaeology produced and the publications resulting.

Here are your major areas of responsibility as a supervisor (in approximate order of importance):

- **Crew Health and Safety:** bad things do happen in the field, and archaeology (like construction work) is inherently dangerous. Nothing you can do will always keep everyone safe but you need to plan ahead to do your very best for both your own peace of mind and for the people who depend upon you. Crew health and safety is the **only** thing more important than the archaeological record.
- **The Archaeological Record:** it is horribly easy to destroy sites, and really hard to make sure that your data is collected and delivered in a clear consistent and durable format. We conduct non-repeatable experiments with each excavation, and no field strategy can hope to recover “everything”. You are making the big bucks<sup>5</sup> precisely to make the hard choices that will forever limit the quality of the archaeological record.
- **People Management:** While you can’t make everyone happy in the field (that’s why most people don’t become field archaeologists) you need to take good care of crew morale. A good crew with good morale will get you out of really bad situations and make up for (your) mistakes and low-budget gear, but a group of seriously pissed off unmotivated excavators will turn even the best funded project into a hellish ordeal. You are almost always working in the middle of a modern community, and these are your interested audience and the immediate stakeholders. You are also probably collaborating with other senior international scholars (and their crew and field assistants). In every case you are also working with a key host institution which will be handling the legal and financial end of the international collaboration. All of these people need to be kept happy and feeling positive about you, CUNY, and the overall project- these are our friends too and we all depend upon their good will to make the archaeology happen.
- **Collections Management:** You will have at least temporary responsibility for a potentially wide range of finds (the gold hilted sword, the fire cracked rock, and the insect - rich soil sample<sup>6</sup>). You need to get these finds out of your hands safely and promptly, and do all you can to make sure they reach their point of curation (museum, institute etc) completely intact and with all data still connected to them (no finds without the register please, and don’t spare the duct tape).

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<sup>5</sup> Your check is in the mail....

<sup>6</sup> Guess which one is the biggest pain to deal with?



- **Funds Management:** Archaeology is really expensive (at least by pitiful academic standards) and as you become PI's you will find much of your life is spent fund raising. You are thus now spending our blood, sweat, and tears<sup>7</sup>, and grant over-runs inevitably end up on our personal credit cards.<sup>8</sup> While no manager at the end of a project can ever claim that every project dollar was optimally spent, we all need to work together to conserve funds (but also spend them promptly when needed to get the best job done) and to maintain a clear paper trail for accounting at the end of the season. Lost receipts tend to come out of PI pockets when the accountants are done with us, so please keep everything that has a number on it and make sure all the crew does the same.
- **Gear Management:** Not only is gear expensive (esp. things like vehicles and surveying equipment) but if it breaks in the field you can lose a whole season or at least find yourself adapting rapidly to severely reduced options (resilience is a key archaeological virtue). Smaller items (trowels, good dust pans, sturdy buckets) that are individually inexpensive can really slow down work if they are lost or broken. Part of your job is to keep the "critical point-failure" big ticket items alive and well, but you also need to manage the small stuff- especially at end of season when chaos is most powerful.
- **End Products:** As PI's you will need to regularly complete the cycle of: "get grant, do fieldwork, produce immediate field report for host institution, do analysis, produce results papers (meetings, email circulation), publish papers & monographs, do public outreach, justify another grant application/renewal"<sup>9</sup>. During all phases of field work you need to be thinking ahead to the final products of the project (seriously publication, public outreach, grant agency required annual report, etc.) and the record you compile in the field needs to be aimed at the final monograph as much as this season's interim report. Note that grants come from reports- no report, late report, or unprofessional report = no funding = no more fun fieldwork. Your written and graphic record compiled in the field is a key portion of this cycle- if you don't give us timely and complete field reports don't expect us to generate more grant money for you to spend.<sup>10</sup>

Following is more detail on these major issues, with some guidelines and concrete suggestions.

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<sup>7</sup> We really do weep a lot over the inevitable grant rejections- just wait, you will too someday.

<sup>8</sup> Yes; this is a guilt trip.

<sup>9</sup> Rinse and repeat for the rest of your career.

<sup>10</sup> Yes, another guilt trip. You all know who you are.....



### Health & Safety

*"You have to go out; coming home is up to the sea" US Lifeboat Service, Unofficial Motto 1899*

People sadly do get hurt, sick, and occasionally killed doing archaeology every year. Nothing will prevent all accidents, but advance planning, practice, preparation are keys to avoiding what can be avoided and limiting the severity of what happens anyway. Here are some steps to take:

- **Risk Assessment Exercise:** in the UK, all projects must do a formal written risk assessment and provide this to all workers for discussion and informed participation. This is a good idea, and serves to focus attention (yours and the crews') on potential hazards ahead of time and develop response plans. For examples see the FSI/NABO field school manual (Milek et al. 2007) and the excellent *Old Scatness Excavation Manual* (Dockrill et al. 2007). **All NABO projects** should complete similar risk assessment exercises.
- **Prior conditions:** you need to be aware of any prior medical issue (heart problem, back problem, dietary issues) before the field season, and everyone must fill in a medical form with informed consent and hold harmless provisions (see Brooklyn Barbuda field school manual for example). If people have prior conditions of any sort you need to know, have the names of any medication they are on and the phone number of their primary care doctor at home. Note that archeologists are at high risk of tetanus, and other shots may be recommended- it is the supervisor's job to confirm that everyone is up to date on pre-field medications. If people are not forthcoming on these issues *do not take them in the field with you*- this is not a good sign for many reasons.
- **First Aid Preparation:** Ideally every supervisor will be Red Cross certified first aid trained, and any advanced EMT level training you can get will be important. Try to have more than one first aid trained staff member per project (what if you are the casualty?). First aid kits need to be carefully assembled and checked regularly (aspirin and band aids tend to disappear), and there needs to be minimally one per vehicle, per site area, and per field house. Nobody has gotten hurt by too much first aid experience or too many first aid kits.
- **On site hazards:** falls, tool injury, baulk collapse (often fatal), & head injuries are major concerns. Collect all loose tools, don't leave string up a moment longer than needed, closely monitor and shore all deep holes (and keep people away from edges), insist on hard hats when needed, and instruct everyone on safe use of basic hand tools (keep people well spaced apart when using shovels or anything sharp). Note that the root cause of many field injuries is fatigue or hypothermia- watch out for this at the end of long days or in the first week or so when people are badly out of shape<sup>11</sup>. For survey a buddy system, communications, and bright clothing should be standard.

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<sup>11</sup> We know who we are.



- **Off site hazards (home life):** statistically more people are hurt in camp/field house than on site. Cooking accidents (scalds, burns, and cuts) can be serious, and slip and fall injuries (bathrooms esp. but also any smooth floor) are common- clean up liquids, use rubber mats etc. The greatest overall danger is **fire**, and supervisors need to closely monitor any potential ignition source (stove, lamps, and smokers), especially anything that runs on gas or involves open flames- make sure everything is secured before going to bed or appoint a camp safety monitor to do this for you. Note that NABO projects are smoke-free workplaces, and keeping future lung cancer victims isolated outside in the rain not only reduces side stream exposure but also significantly reduces fire hazards. **NO smoking inside tents EVER** (rip stop nylon burns rapidly and sticks to what it touches like napalm<sup>12</sup>).
- **Travel:** The single most dangerous thing any of us do regularly is to get in a car and drive someplace. Be aware of this and make sure that seat belts are used and safe driving (hyper-defensive and at speed limit) is done by all drivers (no exceptions for hot dogs and country boys), make sure a working cell phone is with each car, first aid kits are intact, fire extinguisher accessible, and that a walk around inspection of fluids and tires happens daily. Emergency services numbers should be in each vehicle, as well as all insurance documents. **NO** driving while impaired- note that this is legally only one beer in many places. For boats, similar suggestions plus check the weather, moorings, and fuel supply obsessively- and make sure you have something to bail out with and something to row with if you are in need.
- **Drills:** what would you do if X happened? Some drills can be physical (a fire drill for the field house is a good idea), but others can be a group discussion exercise (based on a risk assessment) and this should be a group project early in every season. All supervisors need to have the numbers for the local emergency room, ambulance, late night clinic, fire department etc. both in their cell phones and written into their field notebooks (in case your battery is dead at the critical moment).
- **Doctors, Insurance, Next of Kin Contact:** These all need to be dealt with carefully prior to fieldwork. Supervisors need to take these data with them into the field so that they have them if needed.

### Creating the Archaeological Record

*"All archaeology is destruction"* Heinrich Schliemann 1901

Your success as a field supervisor will be judged entirely by the record you create in the field. This record and the finds will be all that is left of a once-intact archaeological site, and we all share a heavy responsibility to as fully as possible, curate effectively, and disseminate rapidly. Your full cooperation in meeting these standards is not optional<sup>13</sup>, but we are most willing to find ways to meet these recording objectives more effectively.

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<sup>12</sup> No kidding.

<sup>13</sup> Also not kidding.



### Written Record

The written record includes all bag labels, tags, registers, context forms, digital and hardcopy notes, your personal logs, and a normal project narrative. Check the FSI manual for our default setting on labels, registers and context forms. All registers and lists should be digitized as well as created in hard copy before leaving the field.

In addition, you are required to produce these written narrative records:

- **Daily log-** this is a more or less free form diary in which you record the events of each day and your own evolving interpretation of the site, features, landscape etc. and record any factors affecting the progress of the work. It is important to stay current, as you will forget quite a lot by the next day. If you are not writing **at least 2-4 pages per day you are not recording enough detail.** The log can be personal and include crew management issues (it should include something about any factor affecting the running of the project from weather to an outbreak of stomach flu), but be aware that we will include it in the site archive so you may want to save the serious dirt for a more private venue.
- **Project Narrative-** this will be prepared in the field by the end of the project season. You will use your accumulated records (daily log, selected digital field pictures, digital logs and registers, artifact photos, scanned or photo'ed drawings) to create a concise but complete narrative of the project from beginning to end of the season, presenting the major findings and key data sets and providing a readable guide to the overall results of the season as well as a document that can be immediately distributed to colleagues, scientific collaborators, funding agencies, and permit granting institutions. It need not be great literature, but it must be as complete and clear as possible. Examples are available from prior seasons as a guideline. If you work on this report a bit each week as the season progresses you won't have such a big task at the end, and you will find the exercise very valuable in keeping your own mind organized and focused on the "big picture". We suggest you have a go at pulling things together to update the project narrative on a regular schedule each week,<sup>14</sup> and we do **require you to have this done by the end of each working season.**

### Drawn Record

The drawn record includes all plans and profiles, and any drawings produced in the field of finds (as per FSI manual), but also any random sketches that you may make to help visualize stratigraphy, combinations of post holes, etc. You may be a talented landscape artist (like Daniel Bruun) and copies of your

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<sup>14</sup> Perhaps when the crew is out having fun on an excursion or at the bar? ???



efforts should be also part of drawn record. All drawings should be digitized (with a scanner or digital camera- good results can often be had by taping a drawing on a window and then taking the pic) and should be included in the digital archive. Selected drawings should illustrate your project narrative report. Drawings will normally be made on waterproof drawing f m with hard pencil, but you may find that a tracing done in dark ink will digitize more clearly.

### **Photographic Record**

The photographic record is now normally entirely digital, and should be made up of images at 7 megapixel or higher resolution. Two grades of project camera are usually supplied; a small pocket model for working shots and scenery/people pictures and a larger SLR model for record photos and artifact pictures. Both should be carefully curated in the field (heat and damp) and should be kept in hard cases provided or in a securely closing plastic bin or cold chest in the field. The supervisor or delegated team member will be responsible for camera survival, maintenance (clean the lens carefully), and battery recharge (nightly is a good practice). Take lots of pictures, and definitely combine informal working shots<sup>15</sup> with meticulously cleaned and prepared record photos. You are normally supplied with 2 – 4 gigabyte storage cards and there should be no shortage of disk storage space (download each night), so take photos every day unless weather conditions prevent you. Digital camera mages often suffer from movement blur- make use of a tripod or monopod support for best resu d be sure to check that you really have a clear image before saving the shot. Definitely take time to get the record photos clean and right- your colleagues will judge the whole excavation based on the quality of the photos (and they won't miss that loose bucket in the corner). For excellent examples and some solid photographic advice see Dockrill et al. 2007.

In organizing the (many) digital photos, you will find it helpful to create a file structure like this:

- **All site photos-** general dump of all pictures by date
  - **Selected photos-** good shots suitable for publication (and the project narrative report) or use in outreach, both best-of formal record pictures and good working and people shots.
  - **Record photos-** for these use the camera software to add notation information on each shot to the stored file (e.g. “south profile between 496/300 and 496/305 from the north”).
  - **Artifact photos-** these need to have a consistent background and scale as well as artifact number in the photo. If available, use a scanner with the lid up as s will be faster and more consistent. Keep the scanner plate or background cloth clean, artifacts tend to leak dirt.

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<sup>15</sup> Ideally with people's faces showing rather than just their back pockets in the air.



### Metadata

This is the data management buzzword for information that allows you to find and use other information. You need to provide in one place a listing of all the data created (pictures, graphics, finds, but also the finds registers and records of records). This metadata should specify what the records are on (hardcopy, digital), where they are curated (e.g. FSI, CUNY, both) and what programs and versions were used to create the digital. Any information you can provide which might make easier the job of interpreting the project records in your absence will be most welcome, and make sure to flag where the metadata is ("Readme.doc" is traditional).

### Data Backup and Curation

A critical responsibility is to make sure your records survive the season and are properly backed up and curated. This is far easier now than in the bad old days of single copy notebooks, but pitfalls still. Back up early and often (at least daily), and if possible email data sets to multiple addresses and / or use online data stores during the project.<sup>16</sup> At present we supply you with the following media (in descending order of long term reliability):

- Laptop hard drive- convenient and vulnerable.
- Accessory USB plug in drive- also convenient and available at up to one terabyte currently, but still vulnerable to dropping and mechanical damage. Good for backing up the hard drive the project laptop but not secure storage.
- Data stick – solid state memory currently available up to 32 gigabytes. Use data sticks supplied for interim storage, transfer, and backup of critical files.
- Optical media (DVD and CD) – probably the best current choice for long term storage. Burn CD and DVD regularly during the project; make final record copies to distribute to all participants and especially to leave with our host institutions prior to departure. Ship project DVD separately from hand carried notebook computer and accessory drives.

### People Management

*"Teamwork dammit, it's all about teamwork, plus blind loyalty" Commissar Yarrick, Warhammer 40k*

Your life experiences thus far probably are a good guide overall as you wouldn't be working for us if we couldn't put up with you, so don't stop being the nice people you already are (you have already passed a basic NATAH test). Remember now that you are an authority figure and people really do look to you to set the social tone of the project. If you are bitchy and angry as your default emotional setting don't expect sweetness and restraint from the crew, and if you are coming across as god's flawless gift to archaeology everyone will love it when you make the first inevitable obvious field mistake. A sense of humor and a

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<sup>16</sup> Paranoia is totally healthy.



wide tolerance for people who are themselves stressed working hard, and usually sleeping badly will serve you better than a hair trigger temper and readiness to criticize and correct. Remember that archaeology in the field runs on chiefly rather than state-level authority and you have to lead from the front when it comes to the hard nasty stuff<sup>17</sup>. A few general leadership points:

- **Do your job and they will do theirs:** The best way to win the respect of the crew and encourage hard work is to work hard yourself at your job as supervisor. You have a lot to do and you should be up and late keeping up with business – and it does no harm if you can do the after - field work in public space so they know you aren't (always) just back in your room drinking heavily. Do take breaks and get some rest (tired supervisors make mistakes), but your job really is massively time consuming and important and you can always find ways to be a better field archaeologist if you keep trying. You can sleep later.
- **Correct in private; praise in public-** no chewing out where others can hear but pin on medals in front of everyone.
- **Reward teamwork, discourage competition:** we are all in this together trying to serve humanity through archaeology and area isn't in competition with area B. Move people about to give them a wider experience but also to break up trench -cliques.
- **No Favorites:** you will probably not like all the crew equally<sup>18</sup> and you will certainly prefer pleasant tolerant hard workers over nasty whining shirkers, but it is your obligation to be fair and treat people equally- and to put a swift stop to any hazing or other bad-pack crew behaviors.
- **Keep positive in public:** if you are constantly complaining about weather, food, local customs, and those bastards the other project directors in front of the crew you aren't helping either their morale or respect for you. Shut up and soldier if you can't say anything nice, or complain alone in the shower if you have to vent.
- **A bit of distance please:** while you should be informal, accessible, and friendly at all times, the bottom line is that you are in charge and responsible for the overall outcome and the crew aren't. You need to be taken seriously when you put on the director hat, you need time alone to think and plan and you will find that both you and they need a bit of space- let them get blind drunk without your help at least a few days of the week.

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<sup>17</sup> For at least the first 15 minutes or so....then it is delegation time.

<sup>18</sup> Their own mothers may feel the same.



- **Keep those pants on:** while love and field archaeology go together like fried potatoes and high cholesterol you are going over the line if you have a highly public affair with crew member(s) in the field. Apart from chain-of-command and favoritism issues this sets a problematic e for the crew, whose own passionate liaisons you may need to keep within the bounds of discretion.<sup>19</sup> Remember that you will have the rest of your life to pursue this romance- on your own dime please.
- **A tired puppy is a good puppy:** crews need some down time, but not too much. If they are hanging about getting in trouble and you are working yourself to death then you are just not delegating enough. Take some time to organize after dinner activities- registers, catalogs, photo runs, and post-excavation work will keep people busy, focused, and correctly feeling like they are contributing to all phases of the project.
- **Manuals and Notices Early On:** it is far better to give people a clear, (preferably written) set of rules and instructions for how to live in camp or do a particular job right at the outset rather than yell at individuals later on when they violate rules they didn't know existed. Not only are manuals good for consistent results, and setting known common standards<sup>20</sup> they also reduce the need for nagging and critical corrections.

### Gear & Collections

Don't lose or break things if you can avoid it (easy to say)- and the best way is usually to set up a good clear routine early in the project (these things go here and are checked in right away over here) and to try to organize available space effectively (challenging in tents) so that there are good working surfaces and safe storage areas (away from water, cooking, and traffic). There is usually a lot of room for delegation here- even in a small crew somebody can be vehicle monitor, somebody can be finds boxing specialist, somebody can be the 'is this logged in?' inquisitor etc. You will of course have to periodically check that these jobs are actually getting done, but the specialization and delegation can aid crew morale (see above) as well as freeing up a bit of scarce time for you.<sup>21</sup> In planning, prioritize items that are potential point source failures (e.g. electric outlet adapters, battery chargers, car fuses, plastic bags, markers, etc.) where a lack of backup can be particularly crippling (and where there is a cheap fix possible with foresight). Make check lists compulsively (esp. if you are caching gear for next season), but also make lists of things to do differently next time. And do cut yourself some slack- things do break and get lost despite your best efforts, and chaos is powerful.

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<sup>19</sup> If we don't all know exactly when you are having it off then you are being discrete then aren't you? As long as you don't make it anyone's problem (room mate locked out, operatic events, etc.) then discreet romance shouldn't be anyone's business.

<sup>20</sup> Rather like this manual.

<sup>21</sup> It will be a really bad sign if you have to do all these jobs yourself- span of control happens to you too.



## End Products

Archaeological fieldwork is not an end in itself, and we are all judged by the number of **publications** we have (preferably in major peer reviewed journals) – **NOT** by the number of field seasons we have done. We are a socially socialized to respect the 30 season vet with the exceptionally small worn trowel, but outside of the field this cuts no mustard unless there is a long publication record to go with the short trowel blade. Your job in the field will ultimately be judged by the written end products and that is why we require you to produce a fully professional record during the field season and a field report immediately at the end of work. After the season we will work closely with you to bring the season's work to full publishable status<sup>22</sup>, but we need your timely narrative (what happened where when) and a complete and comprehensible data set to work with immediately.

Here are the **required products** you must produce for each field season:

- Digital data archive (as outlined above)
- Any associated hardcopy archive (copies, originals to be deposited with host institution).
- Metadata listing all data types, formats, disposition of originals
- Your daily log
- A professional quality project narrative report with illustrations and data tables. This needs to be ready for immediate review and distribution **as soon as you come out of the field.**

As ever, we greatly value your ideas and inputs, and we expect that this will be only version one of many- comments and suggestions are most welcome.

### Reference:

Dockrill, Steve, Julie M Bond, Val E Turner, Louise D Brown (ed.s).  
*2007 Old Scatness Excavation Manual; A case study in archaeological recording*, Shetland Heritage Publications Lerwick ISBN 0-9543246-7-6

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<sup>22</sup> And make very sure you get full credit for all your hard work.