Compliance Code

Biodiscovery

Taking native biological material under a collection authority

This statutory code is made by the chief executive of the Department of Environment and Science, under Section 44 of the Biodiscovery Act 2004 (the Act).

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ABN 46 640 294 485

Queensland Government

1. Introduction

1.1 Background

Biodiscovery is the collection of native biological material from State land or State waters for the analysis of molecular, biochemical or genetic information about native biological material for the purpose of commercialising the material; or to use the material in any way for gain.

The *Biodiscovery Act 2004* (the Act) was developed by the Queensland Government to provide access to native biological resources on State lands and Queensland waters in a managed, sustainable way. It also sets the basis for State implementation of Articles 1, 3 and 15 of the United Nations Environment Program's Convention on Biological Diversity, ratified by Australia in 1992, the Bonn Guidelines and the *Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization*. The system introduced by the Act is consistent with Queensland's responsibilities under the *Nationally Consistent Approach for Access to and the Utilisation of Australia's Native Genetic and Biochemical Resources* as adopted by the Natural Resources Management Ministerial Council on 11 October 2002.

The Act was developed in consultation with the biodiscovery industry, Indigenous groups, tertiary and research institutions, environmental groups and State and Commonwealth Government departments. The Act requires that biodiscovery collection will be administered through a regulatory framework that may include a compliance code for collecting State native biological resources, and monitoring and enforcing compliance with the Act. The Department of Environment and Science (DES) is wholly responsible for administering the Act.

This *Compliance code for taking native biological material under a collection authority* (the code) has been established under section 44 of the Act by the DES chief executive with respect to collection activities from State land or Queensland waters.

1.2 Purpose

The purpose of this code is to ensure that all native biological resources collected for biodiscovery are obtained in an ecologically sustainable way, with minimal environmental and social impacts on State lands and Queensland waters.

1.3 Application of this compliance code

The Act and this code together regulate the collection of native biological resources for biodiscovery on State lands and Queensland waters. As the name suggests, native biological resources include plants, seaweeds, animals, insects, marine animals and micro-organisms (including fungi, bacteria, archaea and viruses) that are native to Australia. Biological resources might also include soil or water from which compounds or micro-organisms with biological activity could be extracted. Biological resources that are exotic to Australia, and native biological resources that are located on freehold land, freeholding lease, Commonwealth lands and waters, or lands subject to a native title determination granting rights of exclusive possession, are not regulated under the Act and this code.

A collection authority (biodiscovery) authorises its holder to collect quantities of native biological material as prescribed in the code, and to keep the material for biodiscovery. It may also authorise alternative conditions as specified on the collection authority itself. Collection may be undertaken by the holder of a collection authority or by agents contracted or employed by the holder for this purpose. This is conditional on the agents meeting requirements specified in the code.

This code sets out the minimum standards that must be complied with during any collection carried out under a collection authority. These conditions are presented as either general or activity-specific. These minimal conditions for the protection of environmental and social values are to be adhered to by all persons engaged in authorised collection. Alternative or additional conditions may also be specified on

a collection authority. In such cases, all remaining unaltered conditions of the code remain mandatory legal provisions.

The code contains five key sections:

1. Introductory information.
2. General conditions for protecting environmental and social values, and to meet regulatory and administrative requirements.
3. Activity-specific conditions for taking biological material to ensure the sustainability of State native biological resources.
4. Schedules 1–5 detailing the maximum sample sizes and sampling intensities authorised for various groupings of native biological material allowable under the code.
5. Appendices defining terms as used in the code and information required for biodiscovery collection reports. **Note: It is strongly advised that you read the definitions in Appendix 1 before reading the remainder of this document to ensure that a collection authority (biodiscovery) is the appropriate authority for your needs.**

1.4 Access where lands, waters or native biological materials are under both State and Commonwealth jurisdiction

A collection authority, and compliance with conditions contained in the code and the authority, are State requirements for collecting native biological resources for biodiscovery. Additional authority may be required to collect some materials or in some locations that are also under Commonwealth jurisdiction (the Torres Strait area, the Great Barrier Reef Marine Park (GBRMP) and the Wet Tropics World Heritage Area).

It is the responsibility of the holder to obtain the necessary information and appropriate Commonwealth authorities to conduct their collection in a lawful manner. In such cases, collection may be subject to additional or alternative conditions to those imposed by the State and benefit sharing arrangements may need to have been resolved prior to application.

Collection of listed threatened species or from listed threatened ecological communities under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* may require additional authorisation under that Act.

1.5 Enforcement of the compliance code and the collection authority

The holder of an authority granted under the Act is legally accountable for any actions carried out under the authority, such as adhering to conditions attached to the authority. This obligation applies whether the actions are conducted by the holder or a person acting for or on behalf of the holder, including an agent of the holder. Where the authority holder is a corporation, responsibility for ensuring compliance with the code rests with all executive officers of that corporation.

Failure to adhere to the requirements of the code or other conditions specified on a collection authority may result in suspension or cancellation of the collection authority. Such failures are an offence under the Act[1], and may leave the executive of an organisation or corporation, the holder and/or their agent liable for breaches of other legislation such as the *Nature Conservation Act 1992* (NCA), the *Environmental Protection Act 1994,* the *Marine Parks Act 2004* and the *Forestry Act 1959*.

[1] Section 17(2) of the Biodiscovery Act states that provisions of the code are conditions under the collection authority granted under the Act. Section 51 of the Act states that a person must not contravene a collection authority unless the person has a reasonable excuse — a penalty applies.

Authorised officers of the Queensland Government, or inspectors authorised by the DES chief executive, may require persons on State lands or Queensland waters involved in taking or interfering with wildlife or natural resources to establish the legitimacy of their activities. It is in the holders' interests to ensure that they and their agents carry their current collection authority and comply with the conditions therein, when conducting their collection.

The powers of inspectors also extend to the biodiscovery entity's place of business.

1.6 Review of the compliance code

The code is a statutory instrument and may be reviewed and amended from time to time to reflect relevant policy, legislation, research or best-practice management initiatives, and to ensure its effectiveness and suitability.

1.7 Further information

Further information or advice about this code can be obtained from the DES website www.des.qld.gov.au or from the DES Customer Service Team on 1300 130 372.

2. General conditions

2.1 Introduction

Collection may only take place when a valid collection authority and benefit sharing agreement are held, **and** access arrangements have been negotiated with the land/water manager.

2.2 Access to State lands and Queensland waters

2.2.1 The holder and/or their agent must negotiate access arrangements with the relevant land/water manager, prior to or as soon as practical after a collection authority is issued.

Note: It is highly recommended that access be negotiated before applying for a collection authority. If the authority is for a protected area or State forest, access is sought as part of applying for the collection authority.

2.2.2 All access conditions agreed between the holder and/or their agent and the land/water manager must be complied with in addition to other requirements outlined in this section.

2.2.3 The holder and/or their agent must comply with the requirements of all legislation and agreements regarding native title, Indigenous rights and the protection of cultural heritage while collecting.

2.3 Competency and ethical conduct

2.3.1 Authorised collectors must conform to best humane, ethical and professional practices when collecting native biological resources.

2.3.2 Persons engaged in collecting biological resources for biodiscovery must possess the necessary certification, licences, training, skills, experience, equipment and qualifications to ensure their obligations are fulfilled under all relevant legislation, including the collection authority and the code.

For example:

1. Persons operating collection equipment and apparatus, for example traps and nets, are sufficiently skilled and experienced in their operation to ensure minimal by-catch and injury to wildlife.
2. Persons handling potentially dangerous organisms (for example poisonous fish, biting or stinging animals, spiny or toxic plants, toxic algae, soil-borne pathogens, viruses) are sufficiently skilled in safe handling techniques and must comply with relevant health and safety legislation to avoid or minimise illness and injury.

3. The person nominated to supervise field collection is able to identify target specimens to the lowest reasonable taxonomic level as determined by the current state of knowledge.
4. Supervisors of field collection competently manage collectors during fieldwork to ensure that the collection authority, including the code and any additional conditions of the collection authority, are complied with.
5. Supervisors of field collection ensure that collectors undertake capture (where applicable) and sampling techniques with minimal impacts on target and non-target taxa and the environment.

2.3.3 If requested by the DES chief executive, the holder and/or their agent must, within 10 business days of the request, provide proof of the necessary certification, licences, training, skills, experience and qualifications of all persons involved in collecting native biological resources authorised by the collection authority.

2.4 Duty of care

2.4.1 The holder and/or their agent must ensure that the health and safety of people, wildlife, livestock and the environment, and the integrity of infrastructure under the land/water manager's control are not put at risk during or as a result of collection.

2.4.2 Collection must be temporarily ceased or restricted if collection/access is unsafe, for example during a fire risk, or in hazardous weather conditions.

Note: The holder and their agents are reminded of statutory and common-law duty of care requirements, for example:

- *a duty of care to ensure people engaged in, or in the vicinity of, their collection activities are not subjected to unreasonable risks; and*
- *to ensure that their collection staff and agents are provided with safe and healthy working conditions, and possess adequate training in workplace and environmental health and safety requirements.*

2.5 Environmental health and hygiene

Environmental health and hygiene—general

2.5.1 Materials must not be removed from or deposited at collection sites other than as specified in the collection authority.

2.5.2 Precautions must be taken to prevent or minimise the spread of pathogens, pest plants or pest animals during collection.

Note: A technical manual outlining a hygiene protocol for handling amphibians can be accessed via the DES website.

2.5.3 Where sampling is to take place at a collection site known to be, or suspected of being contaminated, the holder and/or their agent must plan their activities to work from clean areas into contaminated areas.

2.5.4 Vehicles, machinery, equipment, clothing and footwear must be thoroughly cleaned and disinfected before entering an environmentally significant area or on leaving a contaminated area.

2.5.5 Hygiene standards for animal handling must be strictly adhered to when collecting to prevent any contamination between individuals and between collection sites.

Waste disposal—general

2.5.6 Where unwanted or unusable collected material or the biological by-products of on-site processing are uncontaminated, they must be disposed of at their collection site, in a manner that minimises environmental impacts.

For example, disposal on bare ground rather than in contact with vegetation, and disposal where there is little risk of dissemination to sensitive environments or aggregation by water.

2.5.7 Waste collected material must not be returned to a collection site once transported away from the site.

2.5.8 Other wastes, including contaminated collection waste, bait waste, transported waste and material collected outside State lands and Queensland waters, must be managed and transported to prevent pollution or contamination, and disposed of at lawful locations in a lawful manner.

2.6 Soil protection

2.6.1 Collection must not result in soil erosion or deterioration of the soil's physical, biological or chemical properties.

2.7 Water quality, aquatic and riparian protection

2.7.1 Collection must be conducted in a manner that prevents or minimises pollution of water, waterbodies and riparian environments.

2.7.2 The integrity of riparian environments must be maintained, including protecting the beds, banks, physical aquatic environment (that is depth, light, temperature), water quality (that is physical, chemical or biological) and aquatic biota from potential impacts associated with collection, for example the infiltration of excess sunlight from vegetation removal.

2.7.3 Vehicles are not permitted within 100m of tidal water areas or 50m of the bed or banks of a freshwater watercourse or waterbody, other than at a formed crossing, existing road or track, or permitted thoroughfare.

2.7.4 When using a vessel to enter a collection site, the holder and/or their agent must minimise disturbance and damage caused by anchoring, mooring, disembarking, loading and embarking.

2.8 Protecting Indigenous cultural heritage resources

2.8.1 Unless otherwise approved by traditional owners of the proposed collection site, collection must not take place within:

- 200m of known burial sites or other spiritual places;
- 100m of known ceremonial places, for example, bora rings and stone arrangements and art places, such as those containing paintings and stencils;
- 50m of known occupational places, such as camps, rock shelters and caves; or
- 20m of known scarred or engraved trees, artefact scatters (that is stone axe heads, flakes), stone grinding grooves, middens, stone quarries, reduction sites, tracks/pathways, Indigenous wells or stone traps.

Note: Indigenous cultural heritage places (including objects, landscapes) must be protected from any potential impacts associated with collection in accordance with the Aboriginal Cultural Heritage Act 2003 *and the* Torres Strait Islander Cultural Heritage Act 2003.

Note: The Department of Aboriginal and Torres Strait Islander Partnerships holds information on the existence of known Indigenous cultural heritage places, Indigenous land use agreements and associated legislated requirements – refer to https://www.datsip.qld.gov.au/people-communities/aboriginal-and-torres-strait-islander-cultural-heritage for details.

Note: It is the authority holder's responsibility to ensure that collection does not breach obligations under the Native Title (Commonwealth) Act 1993 and the Native Title (Queensland) Act 1993.

Note: Applicants are advised to consult with the land/water manager to determine if there are known cultural heritage places on the collection site.

2.8.2 Where an Indigenous cultural heritage place is encountered, the relevant buffers listed section 2.8.1 are to be applied.

2.8.3 Where the type of an encountered Indigenous cultural heritage place is unclear, a buffer of 100m must be applied.

2.8.4 Where an Indigenous cultural heritage place has multiple values, such as a ceremonial site with adjacent artefact scatters, the maximum buffer is to be applied. For example, as the ceremonial site has a 100m buffer this will be applied around the entire area including the artefact scatters, for which a 20m buffer would normally apply.

2.9 Protecting non-Indigenous cultural heritage resources

2.9.1 Collection must not take place within 20m of any known or encountered places of cultural heritage significance (for example settlement, forestry, mining, pastoral, transport, maritime).

Note: Significant non-Indigenous cultural heritage places, for example built infrastructure, ruins and shipwrecks, must be protected from the impacts of collection in accordance with the Queensland Heritage Act 1992 and the NCA. Some historic shipwrecks have further protections under the Underwater Cultural Heritage Act 2018.

Note: Applicants are advised to consult with the land/water manager to determine if there are known cultural heritage places on the collection site.

2.10 Records management

2.10.1 All records required under the Act or the code must be retained by the holder for 30 years from the time the record is created.

2.10.2 All records required under the Act or the code are to be provided by the holder to DES within 10 business days of a request by the DES chief executive or delegate.

2.11 Reporting requirements

2.11.1 When a collection report is requested by the DES chief executive, the authority holder must provide a report within 10 business days of receiving the request.

2.11.2 The report must contain, as a minimum, information specified in Appendix 2 of the code or such other information as the DES chief executive specifies, in the format as prescribed in section 2.11.3 of the code.

2.11.3 This information must be completed in the biodiscovery collection reporting format and provided electronically to DES as requested (for example, on disk, USB data device, or by email).

Note: The biodiscovery collection reporting form is available on the DES website.

2.11.4 All mandatory fields in the reporting form must be completed.

2.11.5 Certification that collection has been made in accordance with the requirements of the collection authority must be submitted with the report.

3. Activity-specific conditions

3.1 Introduction

The holders and their agents must adhere to the following collection conditions unless alternative conditions are specified on the applicable collection authority.

3.2 Sample identification and management

3.2.1 Samples must be labelled with a unique identifier as soon as practical after they are collected, and must remain labelled as long as they are held by or for the holder.

For example, a bar code, or a numeric and alphabetical code such as **BCA00001/20-1**, where **BCA00001** is the identification code for the collection authority, **20** is the year of issue, and **1** is the unique number of the sample.

3.2.2 The unique identifier for each sample must correspond with the following additional information, and these records must remain available or readily accessible with the samples or any derivatives of the samples at all times:

- the identification code of the collection authority the sample was authorised by;
- the date the sample was collected;
- the scientific classification of the material, to the extent known by the holder and/or their agent;
- the geographic location where the material was collected from, such as the real property description or lot on plan, and including geographic co-ordinates, preferably with Global Positioning System (GPS) co-ordinates and the datum of that derived position supplied (for example, World Geodetic System 1984).

3.2.3 All sub-samples or substances sourced from a sample must carry the same identifier as the original sample, or should otherwise allow accurate tracking to the original sample.

3.2.4 Where sample size is determined by weight, the weight of each sample must be determined at the collection site, during collection of samples, using accurate scales, for example digital.

3.2.5 Samples must be transported and stored in accordance with best practice protocols to ensure the maximum viability/quality of the sample.

3.3 Sample sizes and collecting intensity

3.3.1 The maximum allowable sample sizes and collecting intensities outlined in the following schedules must not be exceeded:

Schedule 1: soil, sediment and water

Schedule 2: plants and algae

Schedule 3: terrestrial invertebrates

Schedule 4: aquatic invertebrates, and

Schedule 5: fish.

Note: The schedules can be found at the end of this code. Schedules show:

- *the breakdown of the environment or taxonomic grouping that conditions in columns B, C and D relate to (column A);*
- *the allowed weight of each sample (column B);*
- *the proportion of each individual or compound organism that can be collected for non-destructive collection (column C); and*
- *the proportion of a population that can be sampled for both destructive and non-destructive sampling (column D).*

3.3.2 Authorised taxa must not be collected unless their population size at a collection site is sufficient to yield amounts suitable for biodiscovery and within the limits set in schedules 1–5.

3.3.3 Where part of an organism or of a compound organism is to be collected, no more than the allowed proportion may be collected in the authorised manner.

3.3.4 A maximum of five samples of any one authorised taxon may be collected under one collection authority.

Note: It is understood that some taxa can only be identified under laboratory conditions.

Note: Applications to collect larger sample sizes or at a greater frequency, or applications that are otherwise not compliant with the code, require additional information to be supplied with the application and will receive expert assessment.

3.3.5 A collection site cannot be sampled more than twice under the one collection authority. A second sample from a collection site must not be taken within six months of the first collection at that site.

Examples of how five samples of a taxon may be taken under one collection authority:

- Five samples are taken, one at each of five different collection sites; or
- Four sites are sampled; one of the sites is sampled again eight months later, totalling five samples; or
- Three sites are sampled, and two of the sites are sampled again, one year later, totalling five samples.

3.3.6 Further collection of a taxon from a collection site (that is, more than twice at a site) must not be undertaken without the relevant collection authority being amended, or a new collection authority being issued, to allow such collection.

3.4 State specimens, voucher specimens and taxa suspected of being either new to science or a sighting at a new location

3.4.1 Each sample collected must have a duplicate sample (State sample), labelled identically, that is provided to or held for the State.

3.4.2 The State sample and the sample required for biodiscovery purposes must be provided from the allowed amounts set in column B of Schedules 1 to 5 of the code.

3.4.3 Voucher specimens must be collected for the Queensland Museum or Queensland Herbarium and provided to the Museum or the Herbarium as specified in section 30 of the Act within 40 business days of collection.

Note: The Queensland Museum is to be contacted regarding the collection of all animals, the Queensland Herbarium is to be contacted regarding the collection of all terrestrial plants and algae.

In addition to the Queensland Herbarium and the Queensland Museum potentially requiring voucher specimens for all taxa authorised under the collection authority, voucher specimens of taxa suspected of being either new to science or a sighting at a new location may also be negotiated.

3.4.4 Where taxa suspected of being either new to science or a sighting at a new location are observed but it is not possible to collect them, sufficient information to allow the specimen to be located at a later time (including the exact location and detailed descriptions of the specimen and the locality) is to be recorded and reported to the Museum or Herbarium within 40 business days of the taxa being noted.

Note: Locations in all such reports should contain geographic locations provided as GPS co-ordinates. The GPS location includes latitude and longitude (in decimal degrees) and datum.

3.4.5 Where a taxon only becomes suspected or identified as a new taxa following return from the field, it must be reported to the Queensland Herbarium or the Queensland Museum as described in section 3.4.4 within 20 business days of noting the novelty of the taxon.

3.5 Restrictions on collection

Native biological material

3.5.1 The following native biological material must not be collected under a code-compliant collection authority:

- vertebrate species other than fish (such as mammals, birds, reptiles and amphibians);
- lichens;
- bryophytes;
- terrestrial macro-fungi such as the fruiting body/mushroom stage;
- species listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable, or near threatened under the NCA;
- no-take species ("in possession limits of zero") under the *Fisheries Act 1994*; and

Note: All plants and animals native to Australia are protected in Queensland under the NCA. Species listed in the NCA may be listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable, near threatened, or least concern.

Note: Taking and possession of marine and freshwater species is regulated by the Fisheries Act.

Note: Application to collect restricted taxa or from restricted locations is not code compliant. Where such applications are approved, the collection authority issued will contain specific conditioning.

3.6 Collection of native biological material—general

3.6.1 Collection must be aimed at healthy, abundant and secure populations of target taxa rather than isolated individuals or populations under stress.

3.6.2 Non-target taxa and habitat surrounding target specimens (for example hollow trees and hollow logs, caves, active nests, nesting areas, burrows, glider feed trees and bowers) must be protected from the impacts of collection.

For example, trampling, driving on or depositing soil on understorey plants or animal burrows, or removing branches that support plants or insects dependent on the host plant such as in a symbiotic relationship.

3.6.3 Collection must be planned and conducted in a manner that does not increase the susceptibility of target specimens to stress, diseases, pests or predators.

3.6.4 Humane, non-destructive collection techniques must be used wherever possible, for example, tissue or fluid sampling in a manner that does not lead to the death, debilitation or undue suffering of source individuals.

3.6.5 Where humane, non-destructive collection of discrete parts/fluids is possible rather than killing of whole organisms, captured or collected source specimens must be released at the site of capture immediately following sample collection.

3.6.6 Where non-destructive collection is possible, no more than five individuals can be collected from to accumulate the allowable weight limit for the taxon given in schedules 2–5 of the code.

3.6.7 Where humane, non-destructive collection is not possible, organisms must be collected in their entirety and humanely euthanized according to best practice procedures prior to the required sample being removed.

Note: Fish and invertebrate collection are not covered by the code of ethical practice and are not subject to controls regarding humane treatment or euthanasia. It is recommended that current best practices be adhered to.

3.6.8 Where a range of specimen sizes is available, specimens for destructive collection must be selected to equal the allowable weight limits prescribed in schedules 2–5 of the code without surplus.

3.6.9 Where specimens that weigh more than the allowable limit prescribed in schedules 2–5 of the code are the only specimens available for destructive collection, one entire individual may be collected and surplus tissue retained for use as prescribed under section 3.6.10 of the code.

3.6.10 Surplus tissue remaining from the destructive collection of samples should be retained as a voucher specimen if the surplus material is suitable and required. Where the Queensland Museum or Queensland Herbarium does not require the surplus material, the holder may retain it or dispose of it as prescribed in 2.5.6 of the code.

3.6.11 Accidental (unauthorised) killing or destruction of restricted taxa (see section 3.5 of the code) must be reported to DES, consistent with Appendix 2 of the code. This information must be stored and provided consistent with section 2.11 of the code.

3.6.12 Accidentally killed or destroyed specimens of authorised taxa must be used as the voucher specimen if in suitable condition and required under the collection authority.

3.7 Collection of native biological material—soil, sediment and water

3.7.1 Allowable collection limits for soil, sediment and water are prescribed under Schedule 1 of the code.

3.7.2 Soil and sediment may only be removed from a site to collect micro-organisms.

3.7.3 Excavations must, as far as possible, retain the natural ground level and not result in depressions deeper than 30mm below the surrounding soil level.

Note: Soil and sediment are understood to contain a range of micro-organisms, including fungi/micro-fungi, bacteria, worms, arthropods etc.

3.8 Collection of native biological material—micro-organisms

3.8.1 Sample sizes for micro-organisms are unrestricted within the limits imposed by the code for their collection environment or host.

3.9 Collection of native biological material—plants and algae

3.9.1 Allowable collection limits for plants and algae not listed as extinct in the wild, endangered, vulnerable, or near threatened under the NCA are prescribed under Schedule 2 of the code.

Note: Collection of very small amounts of plant material and algae will ideally distribute the removal across a large number of specimens.

3.9.2 Cuts to plants must result in clean wounds across the shortest axis of a stem/root to maximise plant-healing processes and reduce the likelihood of death or undue detriment to the source plant.

3.9.3 Sampling must prevent tearing and bending, ragged wounds or extended areas of bruised or otherwise damaged plant stems, branches, roots and other tissue.

3.9.4 Cut surfaces of terrestrial plants must be angled to shed water to reduce wound infection.

3.9.5 Plant samples must be removed from smaller or lateral branches or roots, rather than the largest or primary stems or roots of a plant.

3.9.6 Trees or large tree limbs must not be cut or felled to enable samples to be obtained.

3.9.7 Sap, resin and similar exudates from terrestrial plants must be obtained from tapping.

3.10 Collection of native biological material—terrestrial invertebrates

3.10.1 Allowable collection limits for terrestrial invertebrates not listed as extinct in the wild, endangered, vulnerable or near threatened under the NCA are given in Schedule 3 of the code.

3.10.2 Organisms greater than 3mm across the longest axis must be extracted from soil at the collection site and soil returned to its point of origin before departure.

3.11 Collection of native biological material—aquatic invertebrates

3.11.1 Allowable collection limits for aquatic invertebrates not listed as extinct in the wild, endangered, vulnerable or near threatened under the NCA, are set in Schedule 4 of the code.

3.11.2 Where collection of aquatic invertebrates is for biodiscovery, "in possession limits" under the Fisheries Act and subordinate legislation do not apply.

Note: The concept of "in possession limits" under the Fisheries Act and subordinate legislation does not apply to biodiscovery, where the collection of minimal-sized samples is regulated in Schedule 4 of the code. However, collection of species subject to "in possession limits of zero" (that is no take species) is restricted in section 3.5.2 of the code.

3.11.3 For compound organisms, allowable sample weights must be accumulated through collecting larger portions (at the upper limit of allowable proportions set in Schedule 4 of the code) from fewer functional units, in preference to smaller portions from a larger number of functional units.

Note: Taking a smaller portion is not believed to increase the probability of survival for compound organisms. The intent of sampling conditions for compound organisms is to reduce the actual number of functional units disturbed.

3.12 Collection of native biological material—fish

3.12.1 Allowable collection limits for fish not listed as extinct in the wild, endangered, vulnerable or near threatened under the NCA, are set in Schedule 5 of the code.

3.12.2 Where collection of fish is for biodiscovery, in possession limits under the Fisheries Act and subordinate legislation do not apply. However limits may differ in sensitive areas such as the Great Barrier Reef Marine Park where there are joint management arrangements.

Note: The concept of "in possession limits" under the Fisheries Act and subordinate legislation does not apply to biodiscovery, where the collection of minimal-sized samples is regulated in Schedule 5 of the code. Provision is made for species subject to in possession limits of zero, that is. no take species, in section 3.5.2 of the code.

3.13 Collection apparatus and methods

3.13.1 The following trapping and sampling methods and devices must not be used: canopy fogging; trawling; chemical traps (such as malaise traps), impaction traps and sticky traps; firearms (including dart guns and tranquilliser guns); poisons or drugs such as tranquillisers and sedatives.

3.13.2 Fish and aquatic invertebrates may only be collected by recreational fishing apparatus as detailed in Department of Agriculture and Fisheries (DAF) regulations and management plans, unless the holder

and/or their agent has a current permit to use alternative apparatus for scientific purposes issued by DAF.

Note: For information about fisheries regulations, permitted recreational fishing apparatus and other fisheries related issues call the DAF Customer Service Centre on 13 25 23 or visit www.daf.qld.gov.au. Complete copies of the Fisheries Act, regulations and management plans may be accessed at www.legislation.qld.gov.au.

3.13.3 All traps used for capture of terrestrial invertebrates must be designed to exclude vertebrates, fitted with a device to exclude vertebrates, or checked at intervals sufficient to prevent death or detriment to vertebrate by-catch.

3.13.4 All traps and nets must be operated to prevent accidental drowning of wildlife, particularly air-breathing animals such as platypus, water rats, birds, snakes, marine mammals and turtles.

Note: Platypus can only survive for six minutes without air, and special consideration should be given to placement and supervision of traps and nets in potential platypus habitat sites.

3.13.5 Drift fences used to guide terrestrial wildlife into pitfall traps must be removed when pitfall traps are not in use.

3.13.6 Pitfall traps must be securely covered or removed when not in use, or under circumstances where flooding of unattended traps might occur.

3.13.7 Excavations for pitfall traps must be filled using the original soil when the traps are removed, and the soil surface left as close as reasonably possible to the natural level and appearance.

3.13.8 When not in use, fish and aquatic invertebrate traps and nets must be removed from the water or secured open to prevent accidental capture of wildlife.

4. Schedules and appendices

Schedule 1: soil, sediment and water

Sample sizes and collection methods for soil, sediment and water.

A	B
Type of sampling	**Maximum sample size (wet weight)**
Soil and sediment sampling for native biological material less than 3mm when measured across the longest axis.	5kg soil per collection site
Water sampling for native biological material less than 3mm when measured across the longest axis.	5L water per collection site

Schedule 2: plants and algae

Sample sizes and collection methods for plants and algae **not** listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable, or near threatened under the *Nature Conservation Act 1992*, and not otherwise restricted by the code (section 3.5).

A	B	C	D
Type of sampling	**Maximum sample size (wet weight)**	**Maximum allowable collection (% of source plant or alga)**	**Maximum allowable collection (% of population)**

Destructive sampling • take of whole plants	500g	Whole plants where the available specimens are smaller than 50mm height and 10mm in diameter.	5%: no more than 1 individual in each count of 20 like plants or algae.
Non-destructive sampling: non-reproductive tissue • trees • woody shrubs • herbs • grasses • ferns • fern allies • freshwater and marine algae	500g	No more than 10% of any individual plant or alga can be taken. **Wood:** collect from fallen timber, or small branches less than 20cm diameter for *Eucalyptus* and *Corymbia* spp., and less than 10cm diameter for other taxa. **Bark/cambium:** Do not expose the cambium by more than 25% of stem circumference. Obtain from lateral branches wherever possible. **Roots/tubers/rhizomes:** Do not remove more than one primary root/tuber/rhizome per plant. **Clumping plants or patches:** No more than 10% from one edge of any patch.	10%: no more than 1 individual in each count of 10 like plants or algae.
Non-destructive sampling: reproductive material • spore or gamete bearing structures* • seeds • small fruit (includes seed bearing structures) that weigh less than 400g • large fruit (includes large, aggregated seed bearing structures) weighing more than 400g)***	Spore/gamete bearing structures*: 200g Seeds less than 10mm**: 200g or 200 seeds, whichever is the greater amount. Seeds greater than 10mm**: 100 seeds. Small fruit: no more than is reasonably required to obtain 200g of seed or 200 seeds, whichever is the greatest amount. Large fruit: 1 fruit.	Spore/gamete bearing structures: no more than 1 per plant or algae. Seeds: not more than 2% per plant. Small fruit: not more than 2% per plant. Large fruit: N/A. Each fruit is likely to be greater than 2% of the reproductive material of the plant, therefore no more than one fruit can be taken to form a sample.	10%: no more than 1 individual in each count of 10 like plants or algae carrying reproductive material at the time of collection.

* for example reproductive fronds, sporangiophores, reproductive spikes.

** seeds less than or greater than 10mm: refers to seed diameter across the shortest axis.

*** for example bunya cones, cannon ball mangroves, Idiospermum, Macrozamia, Bowenia, Lepidozamia.

Schedule 3: terrestrial invertebrates

Sample sizes and collection methods for terrestrial invertebrates **not** listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable, or near threatened under the *Nature Conservation Act 1992*, and not otherwise restricted by the code (section 3.5).

A	B	C	D
Type of sampling	**Maximum sample size (wet weight)**	**Maximum allowable collection (% of live source specimen)**	**Maximum allowable collection (% of population)**
Destructive sampling	Restrictions as given in collection categories below.	**Whole organisms:** may only be collected where sample removal is likely to cause death, debilitation or suffering to the organism or host organism.	**10%:** no more than 1 individual in each count of 10.
Host-dependent organisms, destructive sampling of host for example endo- and ecto-parasites, commensal organisms.	Conditions for collecting host organisms apply. For example collecting from molluscs is limited by the conditions for molluscs, i.e: 200g molluscs can be collected from. No limit on dependent organisms from hosts.	**Whole host-dependent organisms.** Host may be killed but not taken unless authorised.	**Host: 10%,** no more than 1 individual in each count of 10. **Dependent organisms 100%:** for all on/in a host organism.
Worms for example annelids, platyhelminths, nematodes.	**100g**	**Whole organism**	**N/A**
Molluscs for example land snails, slugs.	**200g**	**Whole organism**	**10%:** no more than 1 in each count of 10.
Crustaceans* for example isopods, amphipods.	**20g**	**As above**	**N/A**
Non-colonial insects, myriapods, arachnids.**	**20g**	**As above**	**N/A**
Colonial insects	**20g**	**As above. No more than 25% of a colony to be collected.** Queens not to be collected or harmed. One edge of colony and point of attachment to be left intact.	**10%:** no more than 1 in each count of 10 colonies.
Host-dependent organisms, non-destructive sampling of host for example ecto-parasites, commensal organisms.	Conditions for collecting host organisms apply. For example, collecting from molluscs is limited by the conditions for molluscs, i.e: 200g molluscs can be collected from. No limit on dependent organisms from hosts.	**Whole host-dependent organisms.** Temporary interference with host permitted.	**Host: N/A** **Dependent organisms 100%:** for all on/in a host organism.

* Aquatic crustaceans and crustaceans that spend part of their life cycle in water are covered under Schedule 4.

** Excluding bird-eating spiders

Schedule 4: aquatic invertebrates

Sample sizes and collection methods for aquatic invertebrates **not** listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable, or near threatened under the *Nature Conservation Act 1992*, and not otherwise restricted by the code (section 3.5).

A	B	C	D
Type of sampling	**Maximum sample size (wet weight)**	**Maximum allowable collection (% of live source specimen)**	**Maximum allowable collection (% of population)**
Destructive sampling	Weight limits given below.	**Whole organisms:** may only be collected for solitary (non-compound) taxa, and where sample removal is likely to cause death, debilitation or suffering to the organism or host organism.	Refer below.
Host-dependent organisms, destructive sampling of host for example endo- and ecto-parasites, commensal organisms	Conditions for collecting host organisms apply (for example, collecting from molluscs is limited by the conditions for molluscs, i.e: 200g molluscs can be collected from). No limit on dependent organisms from hosts. Micro-organisms: no weight limit.	**Whole host-dependent organisms.** Host may be killed but not taken unless authorised.	**Host 10%:** no more than 1 in each count of 10. **Dependent organisms 100%:** for all on/in host organism.
Host-dependent organisms, non-destructive sampling of host for example ecto-parasites, commensal organisms	Conditions for collecting host organisms apply (for example, collecting from molluscs is limited by the conditions for molluscs, i.e: 200g molluscs can be collected from). No limit on dependent organisms from hosts. Micro-organisms: no weight limit.	**Whole host-dependent organisms.** Temporary interference with host permitted.	**Host 10%:** no more than 1 in each count of 10. **Dependent organisms 100%:** for all on/in host organism.
Compound Organisms: (1) taxa with highly active or concentrated bioactive compounds (for example compound ascidians, bryozoans).	100g or two organisms, whichever weight is least.	No more than 75% of a ”colony” may be collected, leaving at least one edge and/or attachment point intact.	10%: no more than 1 in each count of 10 “colonies”.
Compound Organisms: (2) taxa not included in Compound Organisms 1 (for example sponges, soft coral, gorgonians)	200g	No more than 75% of a ”colony” may be collected, leaving at least one edge and/or attachment point intact.	10%: no more than 1 in each count of 10 “colonies”.

Aquatic invertebrates continued…

Solitary organisms: (1) thick-shelled molluscs (for example chitons, snails, clams).	**Whole organisms:** 600g	**Whole organism: 100%** **Tissue sample/fluid: 1%** per organism	10%: no more than 1 individual in each count of 10 like organisms.
Solitary organisms: (2) **taxa with high levels of bioactivity** (for example solitary didemnid ascidians, nudibranchs, aquatic worms.	**Whole organisms:** 100g or two organisms, whichever weight is least.	**Whole organism: 100%** **Tissue sample/fluids: 1%** per organism	10%: no more than 1 individual in each count of 10 like organisms.
Solitary organisms: (3) taxa not included in Solitary Organisms 1 and 2 (for example thin/internal-shelled molluscs, sygnathids, crustacea, echinoderms, holothurians, non-didemnid solitary ascidians.	**Whole organisms:** 200g	**Whole organism**: 100% **Tissue sample/fluids: 1%** per organism	10%: no more than 1 individual in each count of 10 like organisms.

Schedule 5: fish

Sample sizes and collection methods for fish **not** listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable, or near threatened under the *Nature Conservation Act 1992*, and not otherwise restricted by the code (section 3.4).

A	B	C	D
Type of sampling	**Maximum sample size (wet weight)**	**Maximum allowable collection (% of live source specimen)**	**Maximum allowable collection (% of population)**
Destructive sampling	**200g**	**Whole organism**	**10%:** no more than 1 in each count of 10 like organisms.
Non-destructive sampling	**200g**	**Tissue: 1%** of body weight or 5g per organism, whichever is least. **Fluids: 1%** of body weight or 10mls per organism, whichever is least.	**10%:** no more than 1 in each count of 10 like organisms.

Appendix 1

Definitions, acronyms and abbreviations

Term	Definition
Agent	Staff or contractors authorised by the holder of a collection authority (biodiscovery) to collect, or assist in the collection of, native biological resources for biodiscovery.
Authority	See collection authority
Biodiscovery	Has the same meaning as in the *Biodiscovery Act 2004*.
Biodiversity	Has the same meaning as Biological Diversity as defined in the *Nature Conservation Act 1992*.
BSA	Benefit sharing agreement established under section 33 of the *Biodiscovery Act 2004*.
Code	Means the *Compliance code for collection of native biological resources for biodiscovery*, made by the chief executive of the Department of Environment and Science (DES), under Section 44 of the *Biodiscovery Act 2004* (the Act).
Collect	Collection and collection activities relating to native biological material, including: (i) hunt, shoot, wound, kill, skin, poison, net, snare, spear, trap, catch, dredge for, bring ashore or aboard a boat, pursue, lure, gather, pluck, cut, pull up, destroy, dig up, fell, remove, injure or harm; (ii) attempt to do an act mentioned in subparagraph (i).
Collection authority	Has the same meaning as in the *Biodiscovery Act 2004*. Includes the collection authority (biodiscovery) issued by DES and any conditions imposed therein, and the *Compliance code for taking native biological material under a collection authority* made by the chief executive of DES. *Note: The conditions in the code form the standard conditions of the collection authority.*
Collection site	An area of four hectares from which collection of one sample can take place. For circular collection sites the central point is to be located by GPS coordinates. Where the habitat does not allow a circular collection site, boundaries of the site must be located by GPS coordinates.
Compound organism	Colonial and other organisms where individuals occur intimately connected with each other and live as a characteristic whole. They may or may not be mutually dependent.
Contaminated	Containing material likely to have an undesirable impact on the environment, for example, containing non-biological material or material not from the site, chemicals, pathogens, pest species or propagules of pest species

Cultural resources	Places or objects that have anthropological, archaeological, historical, scientific, spiritual or sociological significance or value, including such significance or value under Aboriginal tradition or Island custom.
Declared pest	A live animal or plant declared to be a declared pest under the *Biosecurity Act 2014* and includes reproductive components of the animal or plant.
Destructive collection	The killing or complete removal of a specimen for a sample, or the take of a portion of a specimen that is of a size or using a method likely to result in the death or debilitation of the source specimen.
Duty of care	A statutory and common law obligation to ensure the health and safety of a specified person, such as an employee, and the environment.
Drugs	Chemicals that have an effect on the metabolic, physical or mental functions of an organism (for example sedatives, clove oil, tranquillisers).
DES	Means the Department of Environment and Science
Environmentally significant area	Means any of the following: (a) a protected area; (b) declared Fish Habitat Areas as declared under the *Fisheries Act 1994* (c) land dedicated as a reserve for environmental purposes under the *Land Act 1994*, section 31; (d) a world heritage area listed under the World Heritage Convention; (e) a threatened ecological community, listed by gazettal under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) or a declared RAMSAR wetland under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth); (f) an area of high nature conservation value under the *Vegetation Management Act 1999*; (g) an area, other than State-controlled land, identified in a local government's pest management plan as an area that has special environmental significance for native wildlife (h) an area mapped as an endangered regional ecosystem; (i) a wetland listed as being of State or National importance; or (j) any other area listed under the *Nature Conservation Act 1992*
Fish	Animals which are classified as belonging to the classes: • Agnatha (jawless fish e.g. hagfish); • Cephalaspidomorphi (jawless fish e.g.: lampreys); • Chondrichthyes (jawed cartilaginous fish e.g.: sharks, rays, and rat-fishes); and

	• Osteichthyes (bony fish e.g.: lungfish, trout, bass, salmon, perch) Note: "fish" are defined more narrowly here than in the *Fisheries Act 1994* which extends to all species subject to net catch.
Holder	As defined by the *Biodiscovery Act 2004*.
Herb	Any vascular plant that does not produce a woody stem.
Interfere	Has the same meaning as in the *Nature Conservation Act 1992*; that is, in relation to a cultural or natural resource, it includes destroy, damage, mark, move and dig up.
Land	As defined by the *Biodiscovery Act 2004*.
Land/water manager (Also manager)	The occupier, resident, trustee, trustee lessees, lessees, local, district or regional level government entity that has responsibility and authority in law for activities on a piece of land, or over an area of water, particularly in relation to safety issues. For further clarification, refer to the Information Sheet on land/water managers on the DES website.
Locality	Plain language description of the collection site
Micro-organism	Native biological material less than 3mm when measured across the longest axis, including eukaryotic organisms (for example invertebrates, protozoans, algae, diatoms, plankton, fungi), prokaryotic organisms (for example bacteria), archaea and the viruses.
Native biological material	As defined by the *Biodiscovery Act 2004*.
Native biological resource	As defined by the *Biodiscovery Act 2004*.
NCA	*Nature Conservation Act 1992*.
Non-destructive collection	Removal of a sample from a specimen (for example, tissue or fluid) that is of a size and using a method not likely to result in the death or debilitation of the source organism.
Non-reproductive tissue	Includes vegetative parts of plants such as leaves, foliage, stems, bark, roots, rhizomes and tubers.
Non-target wildlife	Wildlife for which authority to collect has not been given, or which may inadvertently or through negligence be damaged, disturbed or collected (by-catch), in the course of authorised collection.
Poison	Any substance (liquid, solid or gas) that by reason of an inherent harmful property tends to impair health or well-being (temporarily or permanently), or cause death.
Population	Organisms of the same species occupying a given area. For the purposes of biodiscovery, a population is defined as the members of a species occupying the collection site at the time of collection.
Protected area	Includes areas defined under the *Nature Conservation Act 1992* as protected, areas declared under the *Marine Parks Act 2004*,

	and the Great Barrier Reef Marine Park, declared under the *Great Barrier Reef Marine Park Act 1975*.
Queensland waters	Has the same meaning as in section 36 of the *Acts Interpretation Act 1954 (Qld)* which means all waters that are: • within the limits of the State; or • coastal waters of the State.
Reproductive tissue	Means tissue capable of sexual reproduction and includes inflorescences, flowers, seeds, fruits, fruiting bodies, spores and gametes.
Sample	A quantity of native biological resources from one or more individuals of a single taxon from one collection site. Quantities authorised to be collected as single samples for various groupings of taxa are prescribed in Schedules 1–5 of the code.
Source specimen	The animal or plant from which a sample is removed.
State land	As defined by the *Biodiscovery Act 2004*. *Note: this includes but is not restricted to leasehold lands, council lands, stock routes and bed and banks of watercourses as defined by the* Water Act 2000.
State sample	Sample required to be given to the State under the Act
Take	This definition has been derived from the *Nature Conservation Act 1992*. (a) To bring ashore or aboard a boat, catch, cut, dredge for, destroy, dig up, gather, harm, hunt, injure, kill, lure, net, pluck, poison, pull up, pursue, remove, shoot, skin, snare, spear, or trap the native biological material. Or attempt to do an act mentioned in subparagraph (a).
Taxon	As defined in the Macquarie Dictionary.
Vertebrate species	Any species having a backbone or spinal column.
Watercourse	A defined channel that receives and conducts overland water flow for some periods in most years.

Appendix 2

Mandatory information for biodiscovery collection reports

Biodiscovery collection reports are to be completed on a formatted spreadsheet accessible from the DES website. They are to include the following mandatory information:

- Authority holder's name
- Collection authority (biodiscovery) identification number
- Unique identification code/ number for each sample collected
- Collector name(s)
- Collection date (dd/mm/yyyy)
- Team leader responsible for taxonomic identification
- General description of sample (for example 50g frozen mullet liver).
- Scientific name
- Common name
- Locality (plain language description of the collection site)
- Latitude (provided in decimal degrees, minutes and seconds)
- Longitude (provided in decimal degrees, minutes and seconds)
- Datum
- Precision (accuracy of collection site in metres)

Desirable (non-mandatory) information:

- Altitude (metres)
- Vegetation
- Landform
- Slope (degrees)
- Aspect (degrees)
- Age
- Sex (where applicable)
- Reproductive information