NSW GOVERNMENT

Development Data Analytics (DDA)

Technical Data Specification

May 2019

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1. Introduction

1.1 About this document

The objectives of this technical data specification are:

1. To provide accurate and timely access to development application data to enable analysis of development application processes and determination times.
2. To ingest development application information from stakeholder electronic management systems in a structured format.
3. To store and curate data from multiple sources and provide a comprehensive data service.

1.2 Intended Audience

The intended audience for this document are Information technology administrators and planning staff within councils and other relevant planning authorities who are responsible for preparing and assessing development applications.

1.3 Currency of the Standard

The Department of Planning and Industry (DPI) will undertake an annual review of the standard technical requirements. Changes that may occur will be published through an updated version of the specification.

1.4 Contact

For further information or comment please contact:

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2. Components

Figure 2: High level components of the specification

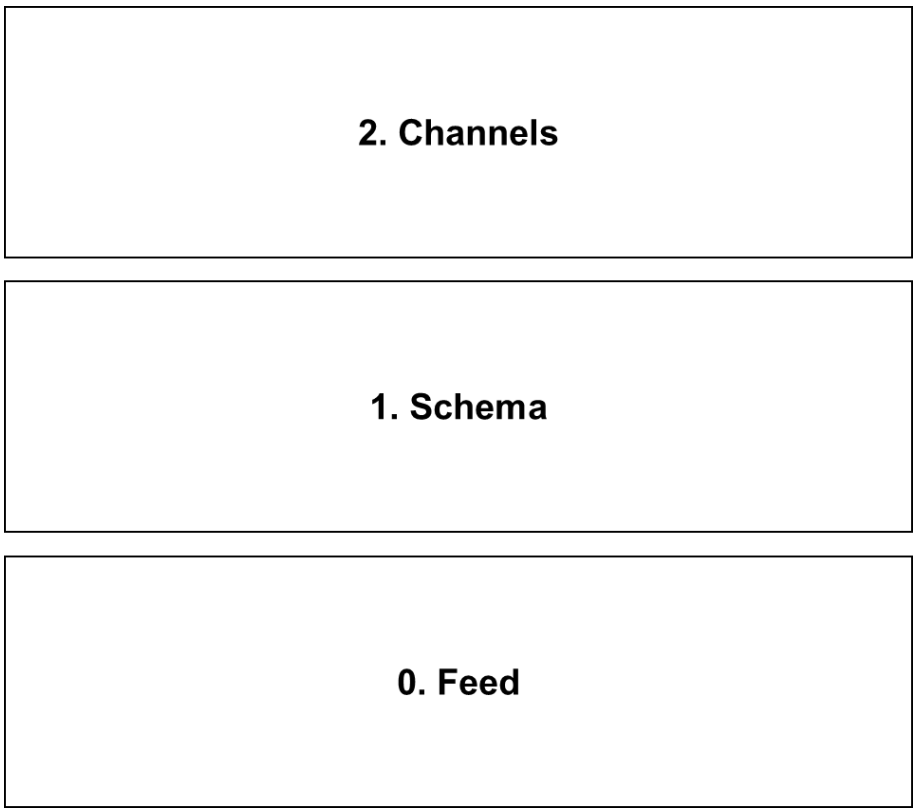


Table 1 – Component description

Component	Description
Feed	Defines the source of application tracking data for DAs and CDCs. Each complying council or certifier would provide the feed stream for application tracking data.
Schema	Defines the data elements that make up individual application tracking records.
Channels	Defines the REST/JSON channels over which the technical data specification can be delivered.

3. Feed

Any compliant source of application tracking data is referred to as a *feed*. A feed is defined by a standard web address of the form. See figure 3.

Figure 3: Feed web address format

Table 2 – Feed terminology and description

Terminology	Description
Protocol	Assume HTTP, but HTTPS can be used by a Council if required.
Web address	The fully qualified web host name for the Complying Authority. By convention, this should be the same as the URL used to access the Council's or the certifying organisations publicly available web site. However, the Councils or vendors may choose a customised web address to make the feed available.
Feed prefix	Component of the URI that indicates a complying feed. **The feed prefix must be as shown in the address format**.
Schema version	Component of the feed prefix that indicates the version of the schema offered by the feed.
Unique Authority Identifier	The UAI uniquely identifies the organisation supplying the feed.
Globally Unique id	When combined with the UAI, id for an application creates a globally unique identifier for an application that is portable between council jurisdictions and private organisations.

Terminology	Description
event_datetime	Date & time the event occurred.
event_type_id	The event_type_id captures relevant events (change of status) relating to the development application. The event types are defined in table 4.7.a

4. Schema

The schema defines the data elements that are published as a compliant feed (see figure 4). The schema has a defined structure which is broken down into ten blocks which are categorised into fields.

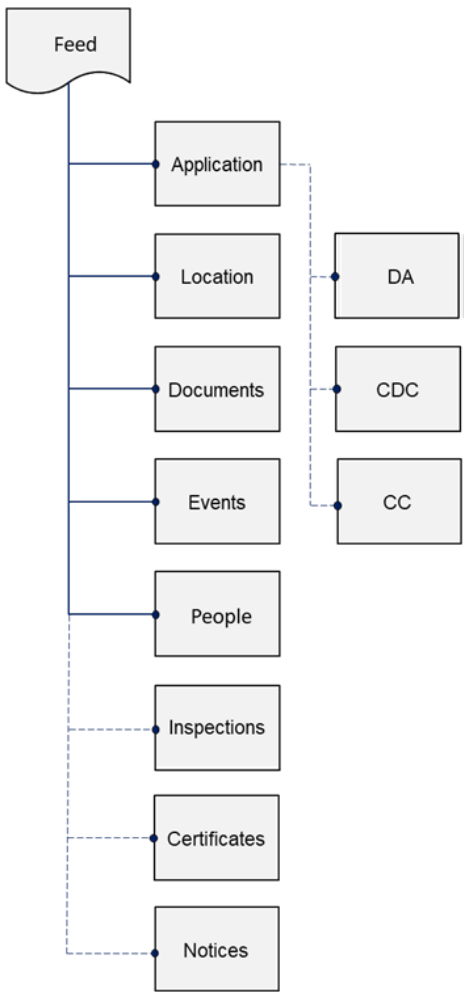
To comply with the technical data specification, a feed must support the basic conceptual structure of an application.

Block types can be mandatory or conditional. Within a block, fields can be mandatory or optional (M/O). A feed must include all mandatory block types. A feed should include any of the conditional block types unless the record type is not applicable.

For each mandatory block type, the feed must include all mandatory fields, and should include any of the relevant conditional fields.

If a field is empty, then it should be populated with the appropriate JSON null value.

Figure 4 – Feed structure



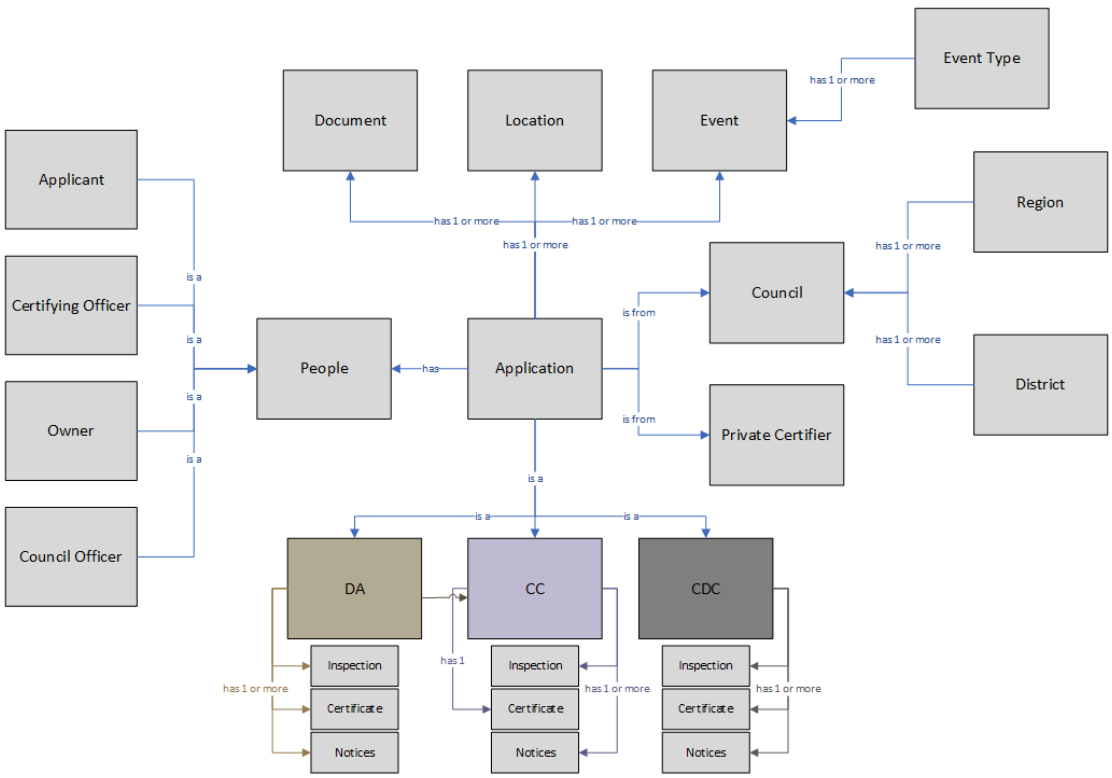
A fundamental condition for the provision of the feed is to “track changes” to application status. The inclusion of this condition facilitates a clearer insight of business processes within local government. The feed will need to provide changes to application status as a transactional update between timestamps. This will ensure a manageable payload for DPE’s and the data provider’s systems as only changes between two defined time points will need to be transferred.

There are eleven block types defined within the technical data specification:

1. Application
2. DA
3. CDC
4. CC
5. Location
6. Documents (Optional)
7. Events
8. People
9. Inspections
10. Certificates
11. Notices

A relational data model stores the feed blocks in data tables which collect groups of data elements into relations. Figure 5 depicts the conceptual data model for DDA and the relationships between various data elements.

Figure 5 – Conceptual Data Model



Sections 4.1 – 4.11 describe the semantics of each of the eleven block types that make up the technical data specification.

4.1 Application

The data feed is categorised into eleven block types. The application block contains unique identifying information about a single development application. The application block must contain the fields presented in table 4.1.

Table 4.1 – Application data fields

Field	M / O	Type	Description
id	M	TEXT	An id that uniquely identifies the application within a certifying authority (Council DA, CDC or CC reference)
development_type	M	TEXT or NUM	Relevant category requested by DPE. See table 4.1.a below. This field can have multiple values.
application_category	M	TEXT	Type of application. See table 4.1b below for the relevant application categories
application_status	M	TEXT	Overall status of the application. See table 4.7.b
description	M	TEXT	A short, concise description of the proposed development
council	M	TEXT	The unique name of the council as identified by DPE spatial services
estimated_cost	M	NUM	Estimated cost of the proposed development
lodgement_date	M	DATE	The date application was lodged by the council
stop_the_clock_days	O	NUM	Number of days spent waiting for information from the applicant
referral_days	O	NUM	Number of days spent waiting for response from a referral agency
determination date	O	DATE	The date application was determined
gross_days	O	NUM	The total number of days for the council to determine the application including stop the clock days and referral days.
net_days	O	NUM	The total number of days for the council to determine the application excluding stop the clock days and referral days.

Field	M / O	Type	Description
related_application_id	O	TEXT	Reference id for a related parent application to the current application. Refer to the notes section under related_application_id for more information.
epi_code	O	TEXT	Relevant Environmental Planning Instrument (EPI) applying to the development. Refer to codes in table 4.1.c below
heritage	O	BOOL	Identify if the proposed development affects a heritage item e.g. heritage listed buildings, tree or area.
zoning	O	TEXT	Standard LEP instrument zone code
vendor	O	TEXT	Name of the software vendor providing the feed
sepp_council_control_code	O	TEXT	State Environmental Planning Policy code

Notes

The value **development_type** is the relevant development category requested by DPE. Users can refer to table 4.1.a for the correct development type.

The development types have been broadly categorised into *Group Terms* (see table 4.1.a). Each group term includes several developments types with similar development characteristics. For example, development types that relate to residential development are categorised under the *Residential* group term (see table 4.1.a.i to 4.1.a.iv).

The large number of development types that must be captured means vendor systems will need to adapt a hierarchy or a decision table structure to ensure that data entry is manageable.

Vendor systems should allow multiple development types to be added to any DA or CDC's.

Table 4.1.a

Group Term	Code
Agriculture	AG
Commercial premises	CP
Industrial	IN
Infrastructure - community	IC
Infrastructure - services	IS
Infrastructure - transport	IT
Subdivision	SU
Other	OT
Recreation	RC
Residential	RE
Retail	RT

Visitor accommodation and Tourism	VT

Table 4.1.a.i

Residential	Code	Industrial	Code	Infrastructure - Community	Code
Alterations and additions	REAA	Alterations and additions	INAA	Alterations and additions	ICAA
Attached dwellings	READ	Boat building and repair facilities	INBB	Cemeteries	ICCE
Boarding houses	REBH	Extractive industries	INEI	Centre-based child care facilities	ICCB
Dual occupancies	REDO	Freight transport facilities	INFT	Community facilities	ICCF
Dwelling houses	REDH	General industry	INGI	Correctional centres	ICCC
Exhibition villages	REEV	Hazardous industries	INHI	Crematoria	ICCR
Group homes	REGH	Heavy industrial storage establishments	INHS	Early education and care facilities	ICEE
Home businesses	REHB	Heavy Industry	INHI	Schools	ICSC
Home occupations	REHO	Industrial retail outlets	INIR	Information and education facilities	ICIE
Home occupations (sex services)	RESS	Industrial training facilities	INIT	Emergency services facilities	ICES
Home-based child care	REHB	Light Industry	INLI	Entertainment facilities	ICEF
Hostels	REHO	Resource recovery facilities	INRR	Function centres	ICFC
Multi dwelling housing	REMD	Storage premises	INSP	Health services facilities	ICHS
Residential flat buildings	RERF	Vehicle repair stations	INVR	Hospitals	ICHO
Rural workers' dwellings	RERW	Warehouse or distribution centres	INWD	Mortuaries	ICMO
Secondary dwellings	RESD			Places of public worship	ICPP
Semi-detached dwellings	RESE			Public administration buildings	ICPA
Seniors housing	RESH			Registered clubs	ICRC
Shop top housing	REST			Respite day care centres	ICRA
				School-based child care	ICSB

Table 4.1.a.ii

Infrastructure - Services	Code	Infrastructure - Transport	Code	Agriculture	Code
Alterations and Additions	ISAA	Air transport facilities	ITAT	Alterations and Additions	AGAA
Electricity generating works	IAEG	Airstrip	ITAI	Aquaculture	AGAQ
Local distribution premises	ISLD	Alterations and Additions	ITAA	Extensive agriculture	AGEA
Sewerage systems	ISSS	Car parks	ITCP	Farm buildings	AAFB
Waste or resource management facilities	ISWR	Depots	ITDE	Forestry	AAFO

Water supply systems	ISWS	Helipad	ITHE	Intensive livestock agriculture	AAIL
		Passenger transport facilities	ITPT	Intensive plant agriculture	AAIP
		Port facilities	ITPF	Rural industries	AGRI
		Roads	ITRO		
		Wharf or boating facilities	ITWB		

Table 4.1.a.iii

Recreation	Code	Commercial premises	Code	Other	Code
Alterations and Additions	RCAA	Alterations and Additions	CPAA	Animal boarding or training establishments	OTAB
Boat sheds	RCBS	Business premises	CPBP	Sex services premises	OTSS
Charter and tourism boating facilities	RCCT	Funeral homes	CPFH	Veterinary hospitals	OTVH
Marinas	RCMA	Office premises	CPOP	Other	OTHR
Recreation facilities (indoor)	RCRI	Roadside stalls	CPRS		
Recreation facilities (major)	RCRM				

Table 4.1.a.iv

Retail	Code	Retail	Code	Visitor accommodation and Tourism	Code
Animal boarding or training establishments	OTAB	Landscaping material supplies	RTLM	Alterations and Additions	VTAA
Sex services premises	OTSS	Markets	RTMA	Backpackers' accommodation	VTBA
Veterinary hospitals	OTVH	Neighbourhood supermarkets	RTNS	Bed and breakfast accommodation	VTBB
Restricted premises	RTRP	Plant nurseries	RTPS	Camping grounds	VTCG
Alterations and Additions	RTAA	Retail premises	RTRT	Caravan parks	VTCP
Amusement centres	RTAC	Rural supplies	RTRS	Eco-tourist facilities	VTET
Artisan food and drink industries	RTAF	Service stations	RTSS	Farm stay accommodation	VTFS
Cellar door premises	RTCD	Shops	RTSH	Hotel or motel accommodation	VTHM
Food and drink premises	RTFD	Specialised retail premises	RTSR	Serviced apartments	VTSA
Garden centres	RTGC	Timber yards	RTTY		
Hardware and building supplies	RTHB	Vehicle sales or hire premises	RTVH		
Highway service centres	RTHS	Wholesale supplies	RTWS		
Kiosks	RTKI				

Subdivision	Code
Subdivision	SUBD

application category various types of applications that will be captured within the application block of the DDA

Table 4.1.b

application category	Code
Development application	DEAP
Complying development certificate	CDCE
Subdivision certificate*	SBCE
Construction certificate	COCE
Section 4.55 modification	SMOD
Strata certificate	STAC
Section s82a review of determination	SREV

***** Subdivision certificates are lodged as DA and will utilise the data fields in the DA Block

estimated cost values should be a numerical format without any currency string. For example: “300000”.

If an application is related to other applications either within a council or in another council, then **related_application_id** should contain a list of references to other related applications. The reference should include the **id** value for that application.

The intent of this field is to capture the relationship between applications with different application numbers. For instance, in the event of a “knock down rebuild” development with a new swimming pool and new secondary dwelling, there may be separate application_id records created. In this instance, the **reference_application_id** should refer to all three applications within this field.

epi_code – Code or description. "COSE” or “Codes SEPP", can be entered. See table 4.1.c.

Table 4.1.c

epi_code	Code
Codes SEPP	COSE
SEPP – Affordable housing	SEAH
SEPP - Infrastructure	SEIN
Council planning instrument	COPI
Other SEPP	SEPP

zoning - For DA and CDCs, the name of the land use zone as it appears in the council’s environmental planning instrument or the land use zone name under the Standard Instrument LEP. If parcels contain multiple zonings, then multiple values for zones should be populated pertaining to the number of zonings effective for the application.

bca_code is a building classification scheme developed by the Australia Building codes board. Refer to https://www.abcb.gov.au/Resources/Publications/Education-Training/Building-classifications

bca_code	bca_code	bca_code	bca_code
1a	4	7b	9c
1b	5	8	10a
2	6	9a	10b
3	7a	9b	10c

4.2 DA

The DA block type contains information and data specific to development applications and modifications lodged with Council. The requirements within the DA block aims to capture information relating to the development application and modification process. Table 4.2 presents the relevant DA data fields.

Table 4.2 – DA data fields

Field	M / O	Type	Description
num_pre_dwells	M	NUM	Number of pre-existing dwellings if any
num_dwells_demolished	M	NUM	Number of dwellings to be demolished if any
num_existing_lots	O	NUM	Number of existing lots if any
num_prop_lots	M	NUM	Number of proposed lots – if the Application is a Subdivision certificate
num_prop_dwells	M	NUM	Number of proposed dwellings/units to be built
Is_studio	M	BOOL	Is it a studio? Yes/No
br_category_1bed	M	NUM	Number of one bedroom in the proposed development
br_category_2bed	M	NUM	Number of two bedrooms in the proposed development
br_category_3bed	M	NUM	Number of three bedrooms in the proposed development
br_category_4bed	M	NUM	Number of four or more bedrooms in the proposed development
land_area	O	FLOT	Lot size or land area in (m2) of development if relevant

gross _floor_area	M	FLOT	Gross floor area (m2) of development if relevant
is_attached_exist _build	M	BOOL	Is the proposed application is attached to an existing building?
is_attached_new _build	M	BOOL	Is the proposed development attached to a new building?
num_storeys	M	NUM	Number of storeys in the proposed development if relevant
num_carparks	M	NUM	Number of car parking space allocated in the proposed development
num_loading_bays	O	NUM	Number of loading bays
determination_level	M	TEXT	Identify which body was the primary determining authority using the coded values supplied, refer to table 4.2.b
is_concurrence_required	M	BOOL	Is concurrence required under an EPI or legislation?
is_designated_development	M	BOOL	Is the development a designated development?
is_integrated_development	M	BOOL	Is the development integrated development under Part 4 Division 5 of the EP&A Act?
is_critical_habitat	O	BOOL	Is your proposed development going to impact critical habitat or is located on a land identified as critical habitat ?
modification_type	O	TEXT or NUM	Identify (if relevant) whether modification is a. s4.55(1) minor error/mis description, b. s4.55 (1A) minimal environmental impact, c. 4.55(2) other modification
is_use_of_private_assessment	M	BOOL	This field refers to the use of private consultants to assess development applications
num_submissions	O	NUM	The number of submissions/petions lodged about the application
new_affordable_rentals_code	M	TEXT	Identify if the proposed development is comprised in any of the coded categories listed in table 4.2.c
num_affordable_rentals	M	NUM	Number of proposed dwellings to be created for rental
any_donations	M	BOOL	This field refers to any political donations and/or gift disclosure by the applicant

is_pre_da_meeting_held	O	BOOL	Was a pre-DA meeting held before lodgment of application
is_change_of_use	M	BOOL	Is the proposed development a change of use from the existing function
is_new_road_proposed	O	BOOL	Is new road proposed? Yes/No
Is_site_compatibility_certified	M	BOOL	Was a site compatibility certificate issued
legal_appeal_class	O	TEXT	If the application is subjected to a legal appeal, refer to table 4.4.d for the appeal class
legal_appellant	O	TEXT	Entity that is lodging the legal appeal, refer to table 4.2.e
appeal_outcome	O	TEXT	Result or outcome of the appeal, refer to table 4.2.f
legal_determination_date	O	DATETIME	Date the legal appeal was determined. Field to be left blank if not relevant

Notes

num_pre_dwells refers to total number of existing dwellings at the development site (if any), if none then a '0' value should be entered.

num _dwells_demolished refers to the number of dwellings to be demolished in development (if any). If none then a '0' value should be entered.

num_existing_lots number of existing lots. If none then a '0' value should be entered.

num_prop_dwells are the number of proposed dwellings in application. If there are no new dwellings proposed, then a '0' value should be entered.

br_category_1bed, br_category_2bed,br_category_3bed,br_category_4bed are the number of bedrooms for a category of bedroom. For example, the **br_category_3bed** for a single dwelling with three bedrooms will be 1. A multi-unit development could have a combination of one, two and three-bedroom dwellings. In this instance, provide the number of bedrooms for each category of bedroom.

land _area should be populated with the total area of the of parcel in metre squared.

gross_floor_area refers to the gross floor area of livable space within development structure.

is_attachd _exist_build is to determine if the new development is attached to an existing building. The field should be populated with a Yes or No.

is_attachd _new_build is to determine if the new development is attached to a new building. The field should be populated with a Yes or No.

proposed _use is a brief description of proposed use of building unit or land (e.g. commercial, residential).

num _storeys captures the number of proposed new storeys in the development. The field should be represented by a number. If none are proposed, a '0' value should be entered.

num_carparks capture the number of allocated parking spaces in the proposed development.

num_loading_bays capture the number of loading bays in the proposed development. The field should be represented by a number. If none are proposed, a '0' value should be entered.

determination_level - For DAs, s4.55 modifications, CDCs and CDC modification, identify by the corresponding code of text relevant to the determining body. See table 4.2.b:

Table 4.2.b

determination_level	Code
Council	COUN
Local planning panels	LOPP
Sydney planning panels	SYPP
Regional planning panels	REPP
Private certifier	PRCE
Other	OTHE

* Other - none of the other options, e.g. Land & Environment Court. Decisions made by administrators in amalgamated councils should be recorded as COUN

modification_type – refers to a modified development application. The **reference_application_id** field within the Application record will transfer the parent application reference to the modified s4.55 or CDC modification record, and pre-populate the necessary fields required from the original application details.

no_of_submissions – can be estimated if necessary. Petition should be counted as one including online petitions.

The field **new_affordable_rentals** refers to the number of new affordable rental housing dwellings. Entries should only be made where new affordable dwellings will be created using the codes defined in table 4.2.b below:

Table 4.2.c

new_affordable_rentals	Code
New affordable housing	NEAH
New secondary dwelling*	NESD
New boarding houses	NWBH
New group homes	NWGH
None	NONE

* (NESD) New Secondary Dwelling – is currently subject to review by DPI policy team.

Is_donation_developer field refers to any political donations and/or gift disclosure by developer. It should be populated with a Yes or No.

is_donation_submittee field refers to any Political donations and/or gift disclosure by person making submission on the DA. It should be populated with a Yes or No.

legal_appeal_class relates to DA's that are the subject of a legal appeal. The relevant classes of appeal are listed in table 4.2.d below:

Table 4.2.d

legal_appeal_class	Code
Class 1	CLON
Class 4	CLFO
Class 5	CLFI
Supreme Court Appeal on Class 1	SCON
Supreme Court Appeal on Class 1	SCFO
Supreme Court Appeal on Class 1	SCFI

legal_appellant – the entity on who is lodging the appeal as shown in table 4.2.e below:

Table 4.2.e

legal_appellant	Code
Developer	DEVE
Council	COUN
Third party	THPA
Objector	OBJE
OTHER	OTHE

appeal_outcome – outcome of the lodged appeal as shown in table 4.2.f below:

Table 4.2.f

appeal_outcome	Code
Upheld	UPHE
Withdrawn	WITH
Dismissed	DISM
Upheld with amended plans	UWAP
Consent orders	COOR
Consent order with amended plans	COAP

4.3 CDC

The CDC block contains information specific to a complying development certificate (CDC) that is lodged with a council or private certifier when applying for complying development. The fields within the CDC block type

capture information submitted in CDC forms to satisfy building, planning and other council data requirements. See table 4.3.

Table 4.3 – CDC data fields

Field	M / O	Type	Description
num_pre_dwells	M	NUM	Number of pre-existing dwellings if any
num_dwells_demolished	M	NUM	Number of dwellings to be demolished if any
num_prop_dwells	M	NUM	Number of proposed dwellings to be built
Is_studio	M	BOOL	Is it a studio? Yes/No
br_category_1bed	M	NUM	Number of one bedroom in the proposed development
br_category_2bed	M	NUM	Number of two bedrooms in the proposed development
br_category_3bed	M	NUM	Number of three bedrooms in the proposed development
br_category_4bed	M	NUM	Number of four or more bedrooms in the proposed development
exist_build_landuse_type	O	TEXT	Existing building or land use type if any
;is_attached_exist_build	M	BOOL	Is the proposed development attached to an existing building?
is_attached_new_build	M	BOOL	Is the proposed development attached to a new building?
num_storeys	M	NUM	Number of storeys in the proposed development if relevant
num_carparks	M	NUM	Number of car parking space allocated in the proposed development
bca_code	O	TEXT	Australian building codes classification for the proposed development, refer to table 4.1.d. This field can have multiple values.
bm_walls	O	NUM	Specify the building materials code used for construction of walls. This field can have multiple values.
bm_roof	O	NUM	Specify the building materials code used for construction of roof. This field can have multiple values.

Field	M / O	Type	Description
bm_floor	O	NUM	Specify the building materials code used for construction of floor. This field can have multiple values.
bm_frame	O	NUM	Specify the building materials code used for construction of building frame. This field can have multiple values.

Notes

num_pre_dwells refers to total number of existing dwellings at the development site (if any), if there is none then the a '0' value should be entered.

num _dwells_demo refers to the number of dwellings to be demolished in development (if any). If there is none then a '0' value should be entered.

num_prop_dwells are the number of proposed dwellings in application. If there are no new dwellings proposed, then a '0' value should be entered.

br_category_1bed, br_category_2bed,br_category_3bed,br_category_4bed are the number of bedrooms for a category of bedroom. For example, the **br_category_3bed** for a single dwelling with three bedrooms will be 1. A multi-unit development could have a combination of one, two and three-bedroom dwellings. In this instance, provide the number of bedrooms for each category of bedroom.

land _area should be populated with the total area of the of parcel in metre squared.

gross_floor_area refers to the gross floor area of livable space within development structure.

is_attachd _exist_build is to determine if the new development is attached to an existing building. The field should be populated with Yes or No.

is_attachd _new_build is to determine if the new development is attached to a new building. The field should be populated with Yes or No.

proposed _use – Brief description of proposed use of building unit or land (e.g. commercial, residential).

num _storeys – captures the number of proposed new storeys in the development. The field should be populated by a number. If there are no new proposed, a '0' value should be entered.

num_carparks – capture the number of allocated parking spaces in the proposed development.

bm_walls - The following coded numerical values as per table 4.3.b must be used:

Table 4.3.b

Building Material	Code	Building Material	Code
Brick veneer	12	Timber	40
Brick Double	11	Aluminum	70
Concrete or stone	20	Curtain glass	50
Fibre cement	30	Other	80
Steel	60	Not specified	90

bm_roof - The following coded numerical values as per table 4.3.c must be used:

Table 4.3.c

Building Material	Code	Building Material	Code
Aluminum	70	Steel	60
Concrete or slate	20	Other	80
Fibre cement	30	Not specified	90
Tiles	10		

bm_floor - The following coded numerical values as per table 4.3.d must be used:

Table 4.3.d

Building Material	Code
Concrete or slate	20
Timber	40
Other	80
Not specified	90

bm_frame - The following coded numerical values as per table 4.3.e must be used:

Table 4.3.e

Building Material	Code
Timber	40
Steel	60
Aluminum	70
Other	80
Not specified	90

4.4 CC

A construction certificate (CC) is issued once a DA has been determined by council. The CC block captures the construction certificate details of the proposed development. Table 4.4 shows the fields within the CC block.

Table 4.4 – CC data fields

Field	M / C	Type	Description
num_pre_dwells	M	NUM	Number of pre-existing dwellings if any
num_dwells_demolished	M	NUM	Number of dwellings to be demolished if any

Field	M / C	Type	Description
num_prop_dwells	M	NUM	Number of proposed dwellings to be built
Is_studio	M	BOOL	Is it a studio? Yes/No
br_category_1bed	M	NUM	Number of one bedroom in the proposed development
br_category_2bed	M	NUM	Number of two bedrooms in the proposed development
br_category_3bed	M	NUM	Number of three bedrooms in the proposed development
br_category_4bed	M	NUM	Number of four or more bedrooms in the proposed development
exist_build_landuse_type	O	TEXT	Existing building or land use type if any
is_attached_exist_build	M	BOOL	Is the proposed development attached to an existing building?
is_attached_new_build	M	BOOL	Is the proposed development attached to a new building?
proposed_use	M	TEXT	Brief description of the proposed use for new development
num_carparks	M	NUM	Number of car parking space allocated in the proposed development
num_storeys	M	NUM	Number of storeys in the proposed development if relevant
bm_walls	O	NUM	Specify the building materials code used for construction of walls
bm_roof	O	NUM	Specify the building materials code used for construction of roof
bm_floor	O	NUM	Specify the building materials code used for construction of floor
bm_frame	O	NUM	Specify the building materials code used for construction of building frame

Notes

num_pre_dwells refers to total number of existing dwellings at the development site (if any), if there is none then the a '0' value should be entered.

num _dwells_demo refers to the number of dwellings to be demolished in development (if any). If there is none then a '0' value should be entered.

num_prop_dwells are the number of proposed dwellings in application. If there are no new dwellings proposed, then a '0' value should be entered.

br_category_1bed, br_category_2bed, br_category_3bed, br_category_4bed are the number of bedrooms for a category of bedroom. For example, the **br_category_3bed** for a single dwelling with three bedrooms will be 1. A multi-unit development could have a combination of one, two and three-bedroom dwellings. In this instance, provide the number of bedrooms for each category of bedroom.

land _area should be populated with the total area of the of parcel in metre squared.

gross_floor_area refers to the gross floor area of livable space within development structure.

is_attachd _exist_build is to determine if the new development is attached to an existing building. The field should be populated with Yes or No.

is_attachd _new_build is to determine if the new development is attached to a new building. The field should be populated with Yes or No.

proposed _use – Brief description of proposed use of building unit or land (e.g. commercial, residential).

num _storeys – captures the number of proposed new storeys in the development. The field should be populated by a number. If there are no new proposed, a '0' value should be entered.

num_carparks – capture the number of allocated parking spaces in the proposed development.

bm_walls - The following coded numerical values as per table 4.4.b must be used:

Table 4.4.b

Building Material	Code	Building Material	Code
Brick veneer	12	Timber	40
Brick double	11	Aluminum	70
Concrete or stone	20	Curtain glass	50
Fibre cement	30	Other	80
Steel	60	Not specified	90

bm_roof - The following coded numerical values as per table 4.4.c must be used:

Table 4.4.c

Building Material	Code	Building Material	Code
Aluminum	70	Steel	60
Concrete or slate	20	Other	80
Fibre cement	30	Not specified	90
Tiles	10		

bm_floor - The following coded numerical values as per table 4.4.d must be used:

Table 4.4.d

Building Material	Code
Concrete or slate	20
Timber	40
Other	80
Not specified	90

bm_frame - The following coded numerical values as per table 4.4.e must be used:

Table 4.4.e

Building Material	Code
Timber	40
Steel	60
Aluminum	70
Other	80
Not specified	90

4.5 Location

The location block provides information about the geographic locations in the development application.

It is mandatory that the data feed provides the location record with the address **lot**, **section** and **plan_label.**

Some applications may cover multiple land parcels thus the address record is comprised of a list of location fields.

Table 4.5 – Location data fields

Field	M / O	Type	Description
full_address	M	TEXT	Composite record of the property address concatenated from the details supplied within the location feed
complex_unit_id	O	TEXT	Apartment or unit number if relevant
street_num	O	TEXT	Identifying alphanumeric character for the parcel
street_name	M	TEXT	Street name for land parcel
street_type	M	TEXT	Street type
street_suffix	O	TEXT	Street suffix (e.g. Concord Street WEST)

Field	M / O	Type	Description
suburb	M	TEXT	Suburb name for land parcel as defined by DPI spatial services
council	M	TEXT	Name of the council as identified by DPI spatial services
postcode	M	NUM	Postcode for land parcel
state	M	TEXT	State name acronym
lot	M	TEXT	Registered Lot number
section	O	TEXT	Registered Section number, or “null”
plan_label	M	TEXT	Registered DP/SP identifier. Value must include DP/SP prefix
geometry	O	TEXT	Composite record containing geographic coordinates (GeoJSON format)

Notes

The address block must contain at least one full_address field as the primary address but can contain more than one if the development is comprised over multiple lots.

In each case the values for **lot**, **section** and **plan_label** should all be captured as strings.

When used, GPS coordinates must make use of the WGS84 datum as per "Earth Gravitational Model 2008 (EGM2008)”. See: http://earth-info.nga.mil/GandG/wgs84/gravitymod/egm2008/ for details.

The format for geographic coordinates must use the GeoJSON specification as per the Internet Engineering Task Force (IETF) standards: https://tools.ietf.org/html/rfc7946

The simplest compliant version of a geometry instance would be a location point. For example:

{"type": "Point", "coordinates": [100.0, 0.0]}

Point coordinates are in x, y order (easting, northing for projected coordinates, longitude, latitude for geographic coordinates). For more advanced geometric types, please refer to the GeoJSON specification as per the IETF.

If a feed is supplying geometric data, then it must be formatted according to the GeoJSON specification.

In general, the **plan_label** will start with either the letters SP or DP, and be followed by a number, but there will be cases where this does not apply such as Community Plans (CP).

When referencing a subdivision, vendors and councils should use the original parcel street numbers and/or lot references. **In the case of a subdivision, the pre-subdivision data should be used**.

4.6 Documents (Optional)

The documents block contains a list of linked references to documents relating to the application. The documents block must include a list of documents, where each document has a reference, title and a link (in the form of a URL) to the location where the document can be downloaded. The provision of a documents block type is

included as most councils provide this as part of the development application tracking information. **It is an optional feature that the certifier or council can include as part of the feed.**

Table 4.6 – Documents data fields

Field	M / O	Type	Description
reference_doc	O	TEXT	Internal reference number of the document for this application
title	O	TEXT	Short, human readable title of the document
doc_url	O	TEXT	URL to location of the document for download

Notes

If there are no documents available for an application, the block should be included, but with no document records specified.

4.7 Events

The events block contains a list of events that have occurred against the application since lodgment. The events block must include a list of events, where each event has an id, date and description (see table 4.7). Inclusion of an **event_type_id** and **application_status** is required.

Table 4.7 – Events data fields

Field	M / O	Type	Description
id	M	NUM	Internal id of event raised against application
event_datetime	M	DATETIME	Date & time the event started
description	M	TEXT	Short description of task or workflow
event_type_id	M	TEXT	Defined event type. See table 4.7.a
applicaton_status	M	TEXT	Overall status of the application. See table 4.7.b

The value for **id** needs to be a string. The value should be unique for council and private certifiers, so it can be used as a reference for the underlying event.

Events must be ordered by **event_datetime, id**. In systems where all events generated on the same day are given the same **event_datetime ,** the system must order the **id's,** so they are increasing.

In this context, the event record represents any type of activity that occurs against an application. For example, “tasks" and "workflows" could be categorised as “events”. The technical data specification does not dictate the type of event, it categorises the event into a standard format.

The **event_type_id** information is crucial in calculating the net determination time of an application. The **event_type_id** code will capture the status of the application at various stages of progress (until its eventual determination), therefore require a list of standardised events. The standardised events capture the key stages of the application approval process. The events will be integrated into council systems as look up tables.

Notes

The following list of standardised **event_type_id** codes in table 4.7.a are used to display the values in the events data fields table:

Table 4.7.a

event_type_id	Code	event_type_id	Code
Lodged	LODG	Manager review	MARE
Under assessment	UNAS	Request for additional info	REAI
Determined	DETE	Advertised/public notification	APND
Concurrence referral	CORE	Inspection	INSP
Referred - external	REEX		

The **event_type_id** captures relevant events (change of status) relating to the development application. It is recommended that the **event_type_id** field is populated with an accompanying description associated with that event. For example, if the application is being referred to an external organisation “REEX” (Referred – External), the description field should reference the relevant agency name as noted “Rural Fire services”. For applications that are referred internally within the Council the “REIN” (Referred – Internal) event should provide a similar description detailing the internal departmental reference “Environmental officer assessment”.

The contents of **application_status** field should be one of the values of the corresponding code presented in table 4.7.b.

Table 4.7.b

application_status	Code
Pending	PEND
Withdrawn or cancelled	WICA
Refused	REFU
Rejected	REJE
Approved	APPO
Deferred commencement consent	DCON

4.8 People

The people record contains a list of people that relate to the application. It includes a list of people, where each person has a name and a role indicating their responsibility with the application. Optionally, the person block can include contact information. The data fields in the people record are presented in table 4.8 below.

Table 4.8 – People data fields

Field	M / O	Type	Description
last_name	M	TEXT	Last name of the person
first_name	M	TEXT	first name(s) of the person associated to the application
company_name	O	TEXT	Company name if relevant
address	M	TEXT	The address of the person related to the application
email	O	TEXT	Valid email address if available of the person related to the application
phone	O	TEXT	Contact phone number of the person related to the application
role	M	TEXT	Refer to the table 4.8.a
priv_flag	O	BOOL	Y/N (refer to notes section)

Notes

role refers to the relationship various people have with the application as part of the development application process. Role should be defined as per table 4.8.a below:

Table 4.8.a

role	Code
Applicant	APPL
Owner	OWNE
Council officer	COOF
Certifying officer	CEOF

certifier_num – officer identification for certifying officers registered and accredited with the Building Professionals Board (BPB)

priv_flag caters for situations where contact information of individuals may need to be restricted or withheld. If a situation exists where the contact details of an individual relating to a component of a DA or CDC need to be withheld, then the feed can include a privacy flag. Under such circumstances, the DPI hosting system will ensure that publication of contact information is restricted.

4.9 Inspections

The inspections block type will capture the “inspections” details of a development (see table 4.9). There will be multiple inspection events during the building phase of a development with multiple events reported within the feed.

Table 4.9: Inspection data fields

Field	M / O	Type	Description
insp_id	M	TEXT	Unique id for an undertaken inspection
insp_type	M	NUM	Inspection type code, see table 4.9.a for reference
insp_desc	M	TEXT	Inspection type description, see table 4.9.a for reference
datetime	M	DATETIME	Date & time the inspection was undertaken
insp_result	M	NUM	Outcome of the inspection, see table 4.9.b for reference
related_application_id	M	TEXT	Reference id of the DA or CDC number assigned by council for the submitted DA, DA modification or CDC application
insp_officer	M	TEXT	First name and last name of inspecting officer
certifier_num	O	TEXT	Accredited certifier number

Notes

insp_id is the unique id assigned to identify the certificate.

insp_type code for the relevant inspection type as per table 4.9.a.

insp_desc description of the inspection type as per the table 4.9.a.

Table 4.9.a

insp_desc	insp_type
Post excavation/pre-footing	1
Slab	2
Framework	3
Waterproofing	4
Storm water	5
Final	6
Fire protection at service penetrations	7
SOU bounding construction	8

insp_result outcomes from inspection as per table 4.9.b.

Table 4.9.b

insp_result	Code
Satisfactory (no issues)	1
Satisfactory (minor issues)	2
Unsatisfactory	3
Missed (not notified)	4
Missed (insufficient advance notice)	5
Missed (unable to respond)	6

related_application_id refers to the unique application id lodged with council or a private certifier detailing the proposal of works prior to a building inspection being undertaken.

insp_officer – First and last name of the inspecting officer.

certifier_num – officer identification for certifying officers registered and accredited with the Building Professionals Board (BPB)

4.10 Certificates

The certificate block reports on the type of certificates issued after an application has been approved or determined (see table 4.10). The “certificates” block will capture certificates that are issued by the certifying authority at various stages of the development process. Due to the variable nature of developments there may be multiple number of certificates issued for a single development application. For example, a large residential flat building or similar development has various stages of development, therefore may require multiple construction and/or occupation certificates. In this instance multiple certificate records will be added to the feed.

Table 4.10: Certificates data fields

Field	M / O	Type	Description
cert_id	M	TEXT	Unique id for issued certificate
cert_type	M	NUM	Certificate type see table 4.10.a
cert_desc	M	TEXT	Certificate description see table 4.10.a
datetime	M	DATETIME	Date time the certificate was issued
related_application_id	M	TEXT	Reference id of the DA or CDC number assigned by council for the submitted DA, DA modification or CDC application
cert_issuer	O	TEXT	Council or private certifying organisation. Refer to cert_issuer in the notes section for more detail

Field	M / O	Type	Description
cert_officer	O	TEXT	First name and last name of certifying officer
certifier_num	O	TEXT	Accredited certifier number

Notes

cert_id is the unique id assigned to identify the certificate.

cert_desc as per table 4.10.a.

Table 4.10.a

cert_desc	cert_type
Construction certificate	1
Interim occupation certificate	3
Final occupation certificate	4
Strata certificate	5

related_application_id refers to the unique application id lodged with council or a private certifier detailing the proposal of works prior to a certificate being issued.

cert_issuer – name of the certifying organisation. If council is the certifying agency, then the council name as defined by DPI spatial services should be populated. If the certifier is a private certifying organisation, then the name of organisation should be populated. If the certifier is a sole trading entity, then this field can be left as NULL.

cert_officer – first and last name of certifying officer

certifier_num – officer identification for certifying officers registered and accredited with the Building Professionals Board (BPB)

4.11 Notices

Notices block relates to notices served by a consent authority for non-compliance to a development. The Notices block captures data associated to notification of non-complying development activity (see table 4.11).

Table 4.11: Notices data fields

Field	M / O	Type	Description
noti_id	M	TEXT	Unique id for notice issued
noti_created	O	DATETIME	Date and time the notice was created

Field	M / O	Type	Description
noti_role	M	NUM	Type of person the notice was served on, see table 4.11.a
related_application_id	O	TEXT	Reference id of the DA or CDC number assigned by council for the submitted DA, DA modification or CDC application
noti_dateissued	M	DATETIME	Date and time the notice was issued

Notes

noti_id is the unique id assigned to identify the notice

noti_created date and time when the notice was created

noti_role type of person to whom the notice was issued/served

Table 4.11.a

Description	noti_role
Owner	1
Owner-builder	2
Principal contractor - licensed	3
Principal contractor - unlicensed	4

related_application_id refers to the unique application id lodged with council or a private certifier detailing the proposal of works prior to a certificate being issued.

noti_dateissued date and time when the notice was issued

4.12 Council (Optional)

Notices block relates to notices served by a consent authority for non-compliance to a development. The Notices block captures data associated to notification of non-complying development activity (see table 4.11).

Table 4.12: Notices data fields

Field	M / O	Type	Description
council	O	TEXT	The unique name of the council as identified by DPE spatial services
num_eft	O	NUM	Total number of employees involved in the assessment of the applications.

5. Channels

5.1 REST/JSON

It is mandatory for compliance to produce a REST/JSON style feed of application tracking data.

The following presents an indication of the types of data items and their naming conventions for a single CDC application


```
application : [
        {
         "id" : "CDC123/2018",
         "development_type" : "2",
         "application_category" : "CDC",
         "description" : "New Single Dwelling",
         "authority" : "Camden Council",
         "certifier" : "John Smith",
         "cerifier_num" : "CBHDG1234"
         "estimate_cost" : "750000",
         "refernce_application_id" : "null",
         "epi_code" : "null",
         "bca_code" : "1",
         "zoning" : "R2",
         "vendor" : "null"
         "more_info_url" : "https://online2.cityofsydney.nsw.gov.au/DA/IndividualApplication?tpklapappl=1388330",
                        }
         "locations" : [
               {
                "full_address" : "99-101 Smith St Smithville NSW 2999",
                "complex_unit_id" : "null",
                "street_num" : "99-101",
                "street_name" : "Smith Street"
                "suburb" : "Smithville",
                "council" : "City of Sydney"
                "postcode" : "2999",
                "state" : "NSW",
                "lot" : "9999",
                "section" : "null",
                "plan_number" : "DP123456",
                "geometry" : "null",
                                }
                                ]
         "events" : [
                {
                 "id" : "987654322",
                 "event_datetime" : "2018-04-29T09:30:00",
                 "description" : "Application Lodged",
                 "event_type_id" : "LODG",
                 "Application_status" : "Pending",
                                                }

                 {
                 "id" : "987654332",
                 "event_datetime" : "2018-05-05T12:30:00",
                 "description" : "Application under assessment",
                 "event_type_id" : "UNAS",
                 "Application_status" : "Pending",
                                                }
                 {
                 "id" : "987654332",
                 "event_datetime" : "2018-07-05T15:30:00",
                 "description" : "Approved",
                 "event_type_id" : "APPO",
                 "Application_status" : "Determined",
                                                }
                                                ]
         "documents" : [
                   {
                    "reference_doc" : "5544779",
                    "title" : "Electronic Application",
                    "doc_url" : "null",
                                }
```

```
            {
             "reference_doc" : "5544783",
             "title" : "Electrical Plan",
             "doc_url" : "null"
                              }
                              ]
"CDC" : {
        "num_pre_dwells" : "0"
        "num_dwells_demolished" : "0",
        "num_prop_dwells" : "1",
        "br_category" : "3BED",
        "num_of_br_cat" : "1",
        "land_area" : "550",
        "gross_floor_area" : "300",
        "is_dual_occupancy" : "NO",
        "exist_bldg_landuse _type" : "null",
        "is_attached_new_build" : "NO",
        "is_attached_new_build" : "NO",
        "proposed_use" : "Residential dwelling",
        "num_storeys" : "1",
        "bm_walls" : "12",
        "bm_roof" : "70",
        "bm_floor" : "40",
        "bm_frame" : "40",
                              }
"People" : [
            {
            "last_name" : "Smith",
            "given_name" : "Joe",
            "company_name" : "null",
            "address" : "365 Day Street, SYDNEY NSW 2018",
            "email" : "jsmith@smithson.com",
            "phone" : "null",
            "role" : "Applicant",
            "cerifier_num" : "Null"
            "priv_flag" : "N"
                                  }
            {
            "last_name" : "Bloggs",
            "given_name" : "John",
            "company_name" : "AB Services",
            "address" : "365 Hay Street, CAMDEN NSW 2018",
            "email" : "jbloggs@email.com",
            "phone" : "null",
            "role" : "Certifier",
            "cerifier_num" : "BP98766",
            "priv_flag" : "N",
                                  }
                                  ]
"Certificates" :[
            {
            "cert_id" : "CC001234",
            "cert_type" : "1",
            "cert_desc" : "Construction certificate",
            "datetime" : "2018-08-05T11:30:00",
            "related_application_id" : "CDC123/2018",
            "cert_issuer" : "Camden Council",
            "cert_officer" : "Bee Strong",
            "cerifier_num" : "BP98777",
                                        }
                                        ]
"Inspections" :[
            {
            "insp_id" : "IP001234",
            "insp_type" : "2",
            "insp_desc" : "Slab",
            "datetime" : "2018-10-09T14:30:00",
            "insp_result" : "1",
            "related_application_id" : "CDC123/2018",
            "insp_officer" : "Joe Smith",
            "certifier_num" : "BP1977",
                                        }
                                        ]
    "Notices" :[
             {
              "noti_id" : "NOT1234",
              "noti_created" : "2018-10-20T14:30:00",
              "noti_role" : "3",
              "related_application_id" : "CDC123/2018",
              "noti_dateissued" : "2018-10-20T16:30:00",
                                                    }
                                                    ]
                                                    ]
```

5.2 REST/XML (Optional)

Vendors can optionally produce an XML formatted version of the feed.

5.3 Paging

In some circumstances, the data for a query might be larger than is sensible to return in a single response. In this case, paging must be used to indicate that more data is available. For example, a paged response to a request for items within a query might look like this:


```
"response": [
    {
      "feed": {
        "application": {
                "id". "DA2013-0381",
                "development_type". "Residential - Alterations and additions",
                "development_category". "DA"
                "description". "New pool plus deck",
                'council". "NSW COUNCIL",
                "certifier". "NULL"
                "certifier_num". "NULL"
                "estimated_cost". "123456",
                "reference_application_id". "NULL"
                "zoning". "R2",
                "vendor". "ABC TECH"
                },
        "events": {
            [
              {
                "event_type_id". "Lodged"
                "event_date_time". "2018-04-20T02:01:07Z",
                "description". "application lodged",
                "status". "PENDING",
                },
                  {
                "event_type_id": " Advertised/Public Notification "
                "event_date_time". "2018-04-25T02:02:07Z",
                "description". "public notification sent",
                "status". "PENDING",
                },
            ]
        "locations": {
            [
             {
                "full_address". "123 Fourfivesix Street Neutral Bay NSW 2089",
                "street_num". "123",
                "street_name"."Fourfivesix",
                "suburb". "Neutral Bay",
                "council". "North Sydney",
                "postcode". "2089",
                "lot". "10",
                    "section". "ABC",
                    "plan_label". "DP20130381"
             }
           ]
        }
      },
    {
      "feed": {
      ...
      }
    }
  ],
  "count": 2,
  "pagination". {
    "previous". null,
    "next". null,
    "current". 1,
    "per_page". 25,
    "count". 100,
    "pages". 1
```

In this format, the returned data is split up into three sections:

- response: shows the raw data of the response, paged according to the pagination block
- count: the number of lock items returned in this response
- pagination: information about how the returned data was spilt into pages according to the full set of data available for the query. The following items indicate how the data was paged:
    - previous: the page number of the immediately preceding page, or null if this is the first page
    - next: the page number of the immediately following page, or null if this is the last page
    - current: the page number of the current page
    - per_page: the number of paged items returned per page
    - count: the total number of items available from the underlying data, unpaged
    - pages: the total number of pages available from the underlying data

5.4 Date Formats

Any field within the schema relating to date or event_datetime (cf. p.17 - 18) should be treated as an ISO-8601 date format. See W3C datetime ISO-8601 profile for details below:

http://www.w3.org/TR/NOTE-datetime

5.5 Encoding

All data in DDA requests should be encoded using UTF-8, and all data returned by DDA-compatible systems should be returned in UTF-8 encoding. See http://en.wikipedia.org/wiki/UTF-8 for details.

6. Operational use cases

The specification defines some use cases to assist with scoping. The use cases assume familiarity with standard API terminology.

Operational use cases describe the scope of use of systems that *comply with* the specification.

List all development applications for (Council)

Allows a DDA query to return all development applications for the specified Council. In this context, the specified Council would be the council that is hosting Vendor software capable of exposing application tracking data. For example:

REQ: GET http://www.examplecouncil.nsw.gov.au/dda /1.0/applications.json
RES: 200 OK

In this case, [Council] is specified by accessing the feed published by the Council at their web address (www.examplecouncil.nsw.gov.au).

List all development applications for (Council) for (Period)

This is a refined version of the “list all development applications” query. It returns selected development applications for a specific period. The results returned will only be for development applications within the period. By default, the feed must support querying of the “event_datetime” field. For example:

REQ: GET
http://www.examplecouncil.nsw.gov.au/dda/1.0/applications.json?event_datetime=YYYY-MM-DDT HH:MM:SS &event_datetime=YYYY-MM-DDTHH:MM:SS
RES: 200 OK

The feed must also support combined querying by “Lodged” event_type_id field & “event_datetime” field (see the **event_type_id** in the Events record, see section 4.3). For example:

REQ: GET
http://www.examplecouncil.nsw.gov.au/atdis/1.0/applications.json?event_type_id=Lodged&event_datetime=YYYY-MM-DDTHH:MM:SS&event_datetime=YYYY-MM-DDTHH:MM:SS
RES: 200 OK

If the end date ‘event_datetime’ field is not specified in the query string, the feed should assume that the request is for the single date specified in the event_type_id = Lodged_start or event_datetime fields. For example:

REQ: GET
http://www.examplecouncil.nsw.gov.au/atdis/1.0/applications.json?event_type_id=Lodged&event_datetime=YYYY-MM-DDTHH:MM:SS
RES: 200 OK

Notes on paging

If a call specifies a page number to a request, then the feed must return just that page of data, rather than the entire set of items for the basic request. Requests should be parameterised using the “page=n” qualifier in the query string. For example:

REQ: GET http://www.examplecouncil.nsw.gov.au/dda/1.0/applications.json?page=2
RES: 200 OK

In this case the feed should return the *second* page of data.

The page size in the number of items should be controlled via the “count=k” qualifier in the query string. For example:

REQ: GET http://www.examplecouncil.nsw.gov.au/dda/1.0/applications.json?page=2&count=20
RES: 200 OK

Both page number and the number of items per page should be able to be specified in the same query string.

7. Compliance

7.1 Compliance requirement

The following items represent the established set of requirements for a compliant feed of application tracking data under this version of the technical data specification. These requirements will be used during testing as the high-level criteria for compliance.

The “enterprise system” refers to a vendor application tracking system installed at a complying authority such as a council.

General

a. The enterprise system must provide an Internet-accessible *feed* to a council’s application tracking data.
b. The feed must be available in machine-readable format.

Schema

c. The feed must provide a list of application tracking records.
d. The feed must support the blocks and fields structure as defined in the schema section.
e. The feed must support the following block types:
    1. Application
    2. DA
    3. CDC
    4. CC
    5. Location
    6. Events
    7. People
f. The feed may support the following optional block types:
    1. Documents
    2. Inspections
    3. Certificates
    4. Notices
g. The supplying system must populate the *fields* for the following block types:
    1. Application
    2. DA
    3. CDC
    4. CC
    5. Location
    6. Events
    7. People

h. The Enterprise System may populate the *conditional mandatory* fields for the following record types:
    1. Application
    2. DA
    3. CDC
    4. CC
    5. Location
    6. Events
    7. People
    8. Documents
    9. Inspections
    10. Certificates
    11. Notices

Use cases

i. The System must support the following specification use cases:
    1. Comply with DDA specification
    2. Produce compliant data
    3. Implement DDA specification
    4. Deploy DDA compliant software

Distribution channels

j. The Enterprise System must provide a machine-readable feed in REST/JSON format.

k. The system must allow the client to consume data in *pages*. All systems must offer paging, they must indicate paged data by populating the `count` and `pagination` properties of the response.

Compliance and certification process

In conjunction with the technical data specification, DPI will define tests to verify that each council or private certifier application tracking system complies with the technical data specification. The items specified in the compliance requirements section describe the overall requirements for compliance.

An execution run will be organised between DPI, vendors, councils, and private certifiers for the implementation. The goal of the certification process is to validate that:

1. The vendor system produces a feed that complies with the mandatory requirements of the specification,
2. If the vendor system is capable of correctly supplying the specified data.

This test execution run will involve:

1. A test script will be run to access the vendor system in operation at council
2. The script will access the feed via a URL specified by the council
3. The script will attempt to query data from the feed according to the use cases specified in this document
4. For each use case, the script will:
    a. Validate that all *fields* defined in the schema section (see section 6) are present
    b. Validate that when any *optional* field is provided it complies with the field formats defined in the schema section (see section 6)

Technical Data Specification Change Management

For the initial go-live, the councils will use the finalized and agreed technical data specification. In production, DPI will support up to a maximum of ‘n-2’ previous major versions of technical data specification and unlimited minor versions. DPI will publish the changes in the latest version of the technical data specification for the councils to upgrade their system (if req.).

Below are some reasons why a new major or a minor technical data specification may be released:

i. Major Versions

1. Some data blocks in the feed are added or removed
2. New code types are added or removed.
3. Security protocol is updated.

ii. Minor Versions

1. Any updates which maintains backward compatibility with the previous version.

DPI will provide sufficient notice (up to 6-12 months) when introducing a new version of the technical data specification and deprecating the last version. DPI may define tests to verify that each council or private certifier application tracking system complies with the latest version of the technical data specification.

8. Non-Functional Requirements

<table>
<tr><th>Requirement</th><th>Description</th><th>Technical Implementation</th></tr>
<tr><td>Security</td><td>APIs publish by DDA data producers shall resist unauthorised, accidental or unintended usage and provide access only to legitimate users.</td><td>Encryption: HTTPS using TLS 1.2 or higher

Authentication: Share secret API key greater than or equal to 25 characters in length. API Key is presented in in every HTTP request as a standard HTTP Authorization header using the Basic scheme. Header is generated using Username: APIKEY

Password: <25-character API key>

Example: Basic TlNXRFBFX1BVQl9lM2J4Mnc4azlrYTJjNzV2eHhtZmFyO……</td></tr>
<tr><td>Volumetrics</td><td>APIs published by DDA data producers must support 200% of the expected peak load expressed in API calls per minute with no degradation in performance.

Each DDA data producer’s volumetrics will be different and dependent on the number of applications processed by the producer.

Each DDA data producer must advise DPE of their expected peak load when onboarded to the system.</td><td>DPI will query for DDA data at most once per hour. The number of requests per query will be determined number of results to be returned and the number of results per page as specified by the pagination requirement. DPI will retrieve the pages sequentially to minimise spikes in load on council systems.

Example: 50 DAs are selected to be returned by the API filtering criteria. Page size is set to 20 results per page, resulting in the API being called 3 times.

Therefore, peak load is 3 API calls per minute. The requirement is to support 200% of peak load which is 6 API calls per minute.</td></tr>
<tr><td>Performance</td><td>APIs published by DDA data producers must meet the agreed response time performance targets. A default of 20 results per page should be assumed.</td><td><table><tr><th>Percentile</th><th>95th</th><th>99th</th><th>100th (Timeout)</th></tr><tr><td>Response Time</td><td>3s</td><td>10s</td><td>30s</td></tr></table></td></tr>
<tr><td>Scalability</td><td>DDA data producers should be able to scale to meet an expect increase in volume of 5% per year without adversely impacting response times of APIs.</td><td></td></tr>
</table>

Availability	DDA data producer APIs must have a target availability of 98.5% or higher excluding scheduled and published outage windows. DPI will be able to queue API calls for later delivery if the target API is experiencing a scheduled or unscheduled outage.	
Audit	DDA data producer API access will be audited and stored by DPI for a period of not less than 7 years.	Councils may optionally audit invocations of the API based on their own requirements.
Serviceability	The DPI API platform is designed to allow real time monitoring and management to ensure NFRs are met. System will report on availability, response times and volumetrics on a regular basis.	